The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the Extension of the Religious Parliament Idea

Founded by EDWARD C. HEGELER

VOLUME XLI (No. 5) MAY, 1927 (No. 852)

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PYTHAGORAS. (569-471 B. C.)

Frontispiece to The Open Court.

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DANTE AND THE DIVINE LIGHT

BY JONATHAN WRIGHT

THE student of Aryan languages finds reason for accepting the belief that light resides within the meaning, within the very structure of our word for the divine,—Daevos, "the Bright Ones", but it has not been my fortune to find, or at least to remember, any discourse by the modern ethnologist as to the ideas of primitive man in regard to light. Perhaps in taking up a consideration of limited scope how in times which have elapsed since writing began civilized man began to speculate about it, it will suffice to take notice of Homer,[1] when speaking of the gods saying:

"They are wonderfully like the rays of the sun."

This is a gleam of light we perceive from far back of Pythagoras and I doubt not if I was as industrious as I should be there might be found even in literature a path of light leading from that divine ray blazing in the Iliad up to Pythagoras but it probably would be a very dim one through the Dark Ages of Greece to that luminary of the dawn. I am content to show here that several hundred years before Pythagoras was born (570 B. C.?) Homer definitely associated light with God. Back of him we doubtless should soon run into Sun worship, so often found among more primitive men than the Achaeans.

It so happens that an article[2] by Miss Hilda Richardson has recently appeared on the Myth of Er and I shall take advantage somewhat of that to introduce what I shall have to say of early Greek thought about light, chiefly Pythagorean, though we shall not need to pursue the Myth of Er throughout all its details in the learned article of Miss Richardson nor in the Republic of Plato[3]

[1] *Iliad*, X, 547.
[2] *Classical Quarterly*, Vol. XXI, 3, 4, July-October, 1926.
[3] 614 b. 3.

whence of course she derived it. It may be as well to say that in the tale Plato tells, Er was slain in battle and his body lay ten days on the field before it was carried home to be burned the twelfth day on the funeral pyre, but before that he returned to life and told of the journey he had been in the other world,—to Heaven and Hell. In the course of it at one place he could look down through the whole of the heavens and see a blaze of light stretched out like a pillar, which bound the heavens together.

We have been taught by Leaf, the most plausible of Homeric exegetists, to regard those who came after Homer or rather after Troy as revolting from the Achaean aristocracy of his day and reverting in their ideas to the ruder and cruder conceptions which had prevailed among the men the Achaeans had found in the basin of the Mediterranean and subjugated. After the disasters of Troy and especially of the return from it ensue the Dark Age which lay between Homer and Pericles. Out of this older wellspring of primitive life there emerged much of the Orphic and Pythagorean mysticism from which Greek thought was never subsequently entirely free and which sprang into a blaze of neoplatonism that ended all ancient thought. When Pythagoras began to speculate on cosmology and theology light became a very prominent element of his theories. As we gather from the Myth of Er he believed that the earth held at its center a fiery core and as the earth was the center of the universe, this, therefore, was more exactly the true center and this is said to have been also the belief of Empedocles and Parmenides. It seemed a reasonable hypothesis to them it was the equilibrium held it in place. Aristotle did not so interpret the thought of the Pythagoreans: "At the center they say is fire and the earth is one of the stars creating night and day, by its circular motion about the center. They construct another earth in opposition to ours which they call counter earth."[4] (*antichthon.*) We may suppose this was Aristotle's interpretation of the equilibrium, but he regards the scheme as having no foundation in observation. He comprehends all Italian or Sicilian philosophers under the name of Pythagoreans, but this will have more apparent than real significance when we come to speak of Dante. There was Pythagoras of Croton and Parmenides at Elea and Empedocles in Sicily, whom Bignone regards[5] as only part Pythagorean.

[4] *De Caelo*, 293 a. 20-25.
[5] *Pensiero Greco*, Vol. II. *Empedocle*. Milan, 1916.

Zeus was the fire, according to Aristotle, in Miss Richardson's interpretation, but Aristotle quotes the Pythagoreans as regarding the fire as the guard house or temple of Zeus, which would look as though the fire was only an attribute of Zeus. However that may be, if the fire was at the center of the earth science, co-extensive with theology for Pythagoras, might well protest the surface of the earth would be without light whatever the nature of the central fire, so it provided for fire at the periphery according to Aristotle and this is the important thing for Miss Richardson dealing with the Myth of Er as Plato tell it, evidently adopting it from the Pythagoreans, for he too was partly Pythagorean. It may have come to him through Parmenides, the expositor of the Italian school, for despite the positive assertion of Diogenes Laertius, it seems probable Pythagoras wrote no books or they all perished with him, but according to Philolaus, another Sicilian and one with whom Plato was in intimate contact, there is this surrounding fire in the Pythagorean scheme. Aetius thus quotes him and probably Philolaus is the source of Aristotle's information, but Parmenides very likely added something of his own and this caused the confusion. Simplicius, the first commentator of Aristotle, dwells upon the vacillation of Parmenides to whom however, we owe apparently the statement that Necessity is a goddess and has her seat in the central fire, but Miss Richardson scarcely knows where to place her. I have alluded to this elsewhere. Suffice it to say here that we can well believe this was an evolution, perhaps of Parmenides, toward our conception of Natural Law, though finally it became hopelessly entangled in the discussion as to Free Will, but in various passages, even in Homer, we find the great gods, even Zeus, great gods as they were, submissive to Fate. Yet this Pythagorean doctrine we suspect finds more than itself in Parmenides.

Not to wander further in the track of such illustrations of the vagaries of Pythagorean doctrine in Parmenides, Cicero[6] says he comments on the glow of light making a circle which spans the heavens, which he calls God. In this Miss Richardson thinks she finds the origin of Plato's remarkable description of light at the periphery of the universe as well as at the center in the Myth of Er and perhaps it is not going too far to think of the terms in which Plato illuminates his theory of Ideas as the Realities in that marvelous and much better known passage which opens the seventh book

[6]*De natura deorum*, III, 28.

of the *Republic,* the counterfeits which impress our senses being but the shadows cast by the divine light behind Realities in the cave. However that may be, it makes trouble for her in adjusting it all with the Myth of Er, which he tells in the tenth and last book, though so highly allegorical did Plato quite evidently intend both incidents one wonders any pains should be taken by commentators to render them consistent. There seems from the same point of view no objection to seating a god, or goddess either, at the center, and yet binding the heavens together at the periphery with bands of light.

It is a trick of the artist in Plato to seem to particularize in the description of these bands, likening them to the straps which run around a trireme somehow to bind it together. The significant thing it seems to me is to note that Ananke or Necessity puts a limit to the extension of the light and to the number of stars. Infinite as the twinkling stars seem, they are but the souls which once inhabited the bodies of men on this earth. Not to lose touch with Dante as to the question of light, we may still take note that he seems to pack both heaven and hell, at least in places, about as full of souls as they will hold. With all the matter and energy or both rolled in one that our men of science are now losing to stellar space without showing any return from it we sometimes entertain some concern for a universe they and Plato and Dante agree has its limits. However, neither Dante nor Plato, though the latter sets Ananke on guard, seem to make any provision for the ever increasing demand on it, any more than we have been able to do for our infinite number of electron sparks that fly from countless suns through countless ages into space. Plato's theory of Metempsychosis, which as well as his celestial physics, he must have from Pythagoras, would seem to take the strain off the capacities of heaven and hell, both in the way of manufacture and storage, but despite Plato's putting Ananke on guard, and like Einstein conceiving of a limited universe, Metempsychosis was not invented as a resource for saving. This goddess, Necessity, is a part of the ever existing problem of whence and whither, which both science and religion have practically ignored. The minds of men flutter in their cage now as they did long ago. The Greeks enlarged the cage as much as possible, but they saw the bars plainly. Dante ignored them and even as scientists so do we. His was not a logical mind and neither are ours. It is to the credit of the Greeks that they refused a final acquiescense in Pytha-

gorean science at a far earlier stage of thought about it than we are in. It became not the science only but the theology of Dante, but Dante was a poet.

To attempt to find a special seat for Law or Necessity bothers the modern historian of ancient thought, who, materialist as he is, takes too literal a view of Greek expositions. Miss Richardson frets much that she can not clearly make out just how those trireme straps used to be adjusted by the skilled Athenian naval architects and she is much concerned that some modern critics locate Ananke at the center and some at the circumference. Finally, like her sex, with more insight than logic, she lodges Ananke in at least two places at one and the same time. For my part I refuse to believe the Greeks thought in terms like that. Ananke was the symbol of Law prevailing in and pervading all things. They thought and made their expositions in terms of allegory and Miss Richardson is at liberty to adjust one or as many goddesses as she pleases in as many places as she chooses, but she modestly only asks for quarters in two places,—in the center and at the periphery too. Aetius and Theophrastus before him gave her permission to regard Ananke "not as dwelling in the fiery circle or crown, but as *being* the fiery circle or crown", which comes to the same thing in the mystical thought which Dante grasped. He often refers to the effulgence of the souls in Paradise and to God as the source of the light and not infrequently as the light itself. I see no reason why this was not essentially the attitude of Pythagoras and perhaps of Parmenides. There seems evidence that the latter already diverged from the more literal beliefs of the Master and in Plato the allegorical is plainly in evidence, but the mystical was by no means absent from the conceptions of Aristotle either, largely influenced as he was by the science of Eudoxus and Callipus. Yet their physics was hardly less wide of astronomic truth than the mystical astronomy of Pythagoras.

However easily one may err in failing to understand that, though the line between allegory and fact is often a wavering one, Plato accepted a large share of the Pythagorean science as reality, we must ever bear in mind how largely ignorant we are what that earlier belief exactly was. The testimony of Heracleides, as Aetius relates it, gives us the assurance, if we needed any, that the individual soul was of the nature of light. As to the world soul that seems to be implicit in the words of Plato as we have them, but

this further assurance from one after Plato who was both a Pythagorean and a Platonist is welcome enough. In the Myth of Er, we see the wavering of the line. Plato proclaims it a myth, yet he embodies with it ideas which he evidently held as realities. Sometimes the fire seemed to surround the world as a band and sometimes the universe is wrapped in it as in a cloak. The central fire must pierce the earth as a band or column running through from pole to pole, however it is expanded externally. Now this necessary conception has interesting connotations. The suggestion has seemed natural that the idea sprang from a myth of which we have more trace than of that of Er. It was that of the pillars which support the sky. Hesiod before Pythagoras probably adopts some much older, possibly an Egyptian myth, for Shu of Egyptian mythology had a counterpart in the Atlas of the Hesiodic Theogony.[7] This without a doubt is of very ancient origin and after the ruin of the Achaean power levelling the walls of Troy, the common people or Pelasgians, if you will, came to their own again. They belonged not to the Nordics but to the Minoan race, we are told, and this tale of Atlas holding up the sky we may easily be allowed to conjecture was Hesiod's interpretation of a myth older than Homer's Troy, but one which long after Troy had fallen had its influence on Pythagorean science. In the Odyssey,[8] however, Homer knows of Atlas, who in turn knows of the deep bottoms of every sea and is the father of Odysseus' lady friend, Calypso.[9] He seems to have pillars which stand around the earth holding up the heavens. There is an ambiguity about just how Atlas does the job, which Aeschylus tries to dispel[10] apparently by imagining Atlas had only one post and kept his shoulder pressed against that, "with the pillar of Earth and Heaven bearing upon his shoulders, no sweet burden", Headlam translates it. We may avoid the untimely joke, but we must realize as thus fabled it was no burden of light he bore and the four Egyptian pillars out of which this myth sprang were not ones of light to bear up the sky, but almost in the time of Aeschylus we are asked to believe it was somewhat out of this tale that Pythagoras fashioned his concept of eight and out of it grew the mechanism of the Myth of Er.

[7]516. 746.
[8]I. 52.
[9]VII. 245.
[10]*Prometheus Bound*, 363.

It is interesting to find even Aristotle pursuing[11] the Atlantean myth. He seems to think it suggests something reasonable to picture Atlas as a diameter, a mere geometrical expression, which has its significance in the tradition of the penchant Pythagoras had for geometry—Atlas a mere diameter "twirling the heavens about the poles" and thereby it seems to me we really do gain a feeling of affinity with that core of blazing light bored by Pythagoras through the earth and sticking out at each pole and leading to the peripheral fire, and we may easily imagine Aristotle discussing with his master Plato the meaning of the Pythagorean myths of Atlas and Er and the Egyptian views. It must be confessed Plato using them allegorically was more successful with them than Aristotle using them in astronomical science.

The poles, with which the light was associated in these theories, if we may so call the myths before the time of Aristotle, and the bands of light around the universe, suggested doubtless by the Milky Way, are somewhat lost in the imagery of Dante, but the Milky Way as an astronomical phenomenon impressed his poetical fantasy and the Light as the Divinity Himself and as the emanation from Him is clearly an uncontaminated concept of Pythagoras. Like Aristotle we in science are seeking plausibility for the undying visions of poetic natures of such as Pythagoras, Plato, Dante in transforming the ancient fire into energy and indeed for the scientist, if mystically moved this may emanate from God as Light. It is solar energy and is described by Professor Pupin "as the breath of the sun breathed into the nostrils of terrestrial clay so that it may also live". Thus from the pure scientist we get the concept of the world soul and the soul in each one of us, much as Plato had it from Pythagoras.

Elsewhere[12] I have dwelt with some emphasis on Dante's possible debt to the Arabians. It really seems like carrying coals to Newcastle to think of the Arabians bringing Pythagorean inspiration to the boot heel of Italy, where Pythagoras lived and thought and suffered, not too far from Florence where Dante was born nearly two thousand years later. Between that birthplace of the great Florentine and the scenes the great Samian had before him at Croton lay the azure coast and the marvelous lights of the bay of Naples, a region where light might be spontaneously worshipped more than twice in

[11] *De Motu Animalium*, 699 a 26.
[12] *Science*.

the history of thought. It needed no Arabians to bring the worship of light to Dante. It is thus rather than historically we must think of Dante involved in the maze of images Pythagoras taught to the Italians basking in the sunshine from the Straits of Messina to the Ligurian coast. The light which surrounds the blessed Paradise[13] we find spoken of as a vesture or loving incasement of light in which all are wrapped and on which is conditioned their view of God.

"..... *amore*
si raggera d'intorno cotal vesta."

He speaks of its coming from a source that is not extinguished in expending it and in this we get a glimpse of a thought he has from Aristotle's Unmoved Mover, but Dante plainly reveals his own God as the Mover of the heavens revolving around a stationary axis.[14] Substance and its attributes of motion by which it is revealed to us all alike are combined in light alone.[15] Perhaps he has this from the catholic version of the Epistle of St. John, though even so very probably the ultimate source is in Pythagoreanism.

Parenthetically it should be realized, though I may have an opportunity of taking it up more systematically elsewhere, that heat was of course then so associated with light in the divine conception of both Pythagoras and Dante that we can not separate them. We still have difficulty even technically while we know the processes of life maintenance and rejuvenescence and generation are inextricably bound to both. Ultimately there is no germination and persistence of life without light any more than without heat. Light then is a part of that mystery of life around which all religions everywhere have always built their temples. As late as Herschel, a hundred years ago and a little more, it was questioned whether light essentially was different from radiant heat and it was not until Langley searched carefully the lines of the solar spectrum that he was able to find where light left off and heat still persisted. We are much bothered to find evidences that nature experimenting with life processes has invented a way to make light without heat, which we can not do. We are still confused with the mental effort we are obliged to exercise in conceiving of light vibrations that give no light, so far has science outstripped our senses.[16]

On the other hand fire also was embodied, usually without fun-

[13] *Paradiso*, XIV, 39.
[14] *Paradiso*, XXVII, 106.
[15] *Paradiso*, XXXIII, 88.
[16] Randall, H. M., "Infra-red spectroscopy," *Science*, February 18, 1927.

damental distinction, in the conception of light by the ancients. Etherial vibrations, the forerunner of our modern conception of cold light had no part, or at least but very feeble beginning, in their natural physics and we have yet to see whether life processes can manufacture light at the lowest temperatures possible for them in other functions. The idea of the true nature of light is still very much in the air. We are satisfied with the wave theory for its origin, but for its photographic phenomena we have still to register a corpuscular theory. It is not the poets only then who use a conception of light in a loose manner. Somewhat in this way light has always been a symbol. It has always played the largest of parts in the allegories of biblical origin. The Quaker's "Mind the light", and his reference to the "light within" finds frequent antecedents in the *Commedia*. It is light and joy and virtue are mixed in the body,[17] Beatrice says to Dante. "I see well the eternal light shines in thy mind,"[18] and when she seems to be speaking of the angels and the heavenly bodies, "We are all come of the larger body in Heaven which is pure light,—intellectual light,—full of love."[19]

We need not return to the Myth of Er, which Miss Richardson has carried in her discussion beyond the interests of this paper and before we return to Pythagoras from whom we have been able in her analysis to derive so much which has been useful to us, we may turn for a moment to the Arabian conception of Paradise revealed in the book of Miguel Asin which I have reviewed elsewhere. As has been said the visions of Dante may have come from Arabian sources, but as to those of light, no one need take this very seriously who knows the language of the Christian scriptures even if the tradition of Pythagoras in Italy is only a tradition[20] instead of an inheritance. In one of the versions of the *Miraj* or Ascension of Mahomet to Heaven the Moslem legend speaks of the dazzling brilliance of the light blinding those that behold it and Asin[21] draws attention to the fact that in both stories (the Moslem and the Dantesc) God is depicted as a focus of ineffable light. In the one as in the other very many more examples might be cited than I have room for here but a comparison of the Islamic stories with those

[17]*Paradiso*, II, 143.

[18]*Paradiso*, V, 7.

[19]*Paradiso*, XXX, 38.

[20]Giannelli, Giulio; *Culti e miti della Magna Grecia*. Firenze, 1924.

[21]Asin, Miguel; *Islam and the Divine Comedy*. Translated by Harold Sunderland, London, 1926.

of Dante makes it clear "that in both stories the element of light reigns supreme".

Some of the ancient writers of Islam, as a concession to the sex intoxication of the vulgar after Mahomet, stated there were two heavens for their co-religionists,—one for the spiritual and one for the sensual followers of the prophet. Fortunately we need here have no dealings with the latter, but to the former belongs the vision of God as Light. In the Moslem *Futuhat* each in his respective grade and place and magnificently arrayed falls prostrate before the dazzling light and they await the epiphany of the Lord. It is one of the many similarities of the exposition of Ibn Arabi with that of Dante, which Asin has made so suggestive of marked Arabian influences in the *Commedia,* and it is Ibn Arabi who furnished the Islamic civilization with idealistic conceptions of women, which Dante has enshrined forever in Beatrice.

Now it is necessary to say something of the possible ways, outside of books, the tradition and the thought of Pythagoras was preserved among people after the collapse of the Graeco-Roman civilization. We can not particularize as to light worship and it is not absolutely necessary to seek the preservation of it outside of the texts, which were open to Ibn Arabi and Dante too. They both might have had it from the neo-platonists if not from more ancient writers. We are apt to forget the eastern provinces of the Roman empire were in a position to retain its traditions and especially its religious traditions long after northern barbarians overran the proconsulates in the west and keeping this in mind is in itself a suggestion of the path to Dante from Ibn Arabi. Long before its fall, Asia had furnished Rome with most of its religions, but archaeology has revealed the Pythagoreans there among the Christians in the first century by the discovery of the Basilica at the Porta Major.[22] How long after the advent of Christianity in Rome the influence of the Pythagoreans was important in the evolution of the budding Christian faith there we do not know from archaeological evidence, but it has long been familiar to those who have studied its origins in other ways that through some channels, never very clear, Pythagorean influences pervaded much of the early gospel. From these excavations we learn that as early as the reign of Claudius (52-54 A. D.) the foundation of a church was laid upon a basilica which evidently had been a temple of the Pythagoreans, a rather striking

[22]Carcopino, Jerome, *Revue de deux Mondes.* 15 Oct.—15 Nov., 1926.

symbol of the springing of one faith from another. We know that Nigidius Figulus, who flourished some 60 or 70 years B. C. at Rome had been their prophet, teaching as the inscriptions in the basilica show how the sun draws to itself the pneuma of the elect and we get an indication even then of a faith not far removed from that of Dante. How far the ideas of Pythagoras prevailed among the people and the compatriots of Porphyry and Iamblichus, who wrote lives of him, we do not know, but the thoughts of these learned men were mightily moved by him.[23] Porphyry died in 301. He was a Tyrian by birth and a Semite and he frequented both Rome and Sicily. Iamblichus died in the reign of Constantine about 333 A. D. He lived most of his life in Syria and was more of a Pythagorean than Plato himself. Proclus, who died in 485 A. D. was scarcely less controlled by the ancient doctrines of Orpheus and Pythagoras through Plato. Beyond this it is difficult to go, for learning of all kind mouldered at Byzantium and at Alexandria, but less than a hundred years after the death of Proclus Mahomet's career began.

In less than two hundred years apparently they began to construct myths of Mahomet's visit to Heaven and Hell. So completely was the old order of things rooted out of Italy, where Pythagoras lived and taught, that beyond the traditions of him preserved by the neo-platonist authors of his life and propagators of his philosophy we are not free to suppose his influence survived in any other way than through the Scriptures and a few classical authors to influence Dante,—through no local traditions whatever, but through the airs, waters and places which made Pythagoreanism flourish in Italy in the first place. From these Dante may well have drawn it largely anew and we must be a little cautious in freely following Asin's suggestion that much of it came through the Arabians, so far as light worship is concerned at least. It is suggested that the passage in the 2nd Epistle of the Corinthians, xxii. 2-4, in which St. Paul refers to his having been wafted to the third Heaven was the nucleus around which some of the Moslem legend grew. At least it was confidently asserted that the vision of St. Paul in the Apocalypse reached western Europe through Islamic adaptations of the Greek Apocalypse. Not to step too far out of the path of light and lose touch with Pythagoras too, as a trace of him is discoverable

[23]Whitaker, Thomas, *The Neoplatonists.* 2nd ed. Cambridge Univ. Press, 1918.

in Dante, one may take note that in the *Inferno*[24] it is found possible for souls to inhabit trees on the leaves of which Harpies feed, thus causing anguish to the sinners. I think Egyptologists are of the opinion that these Harpies which are of course taken from the Aeneid, are of the race of souls themselves which haunt the tombs of Kings, but however that may be Boccaccio[25] feels called upon to set up an elaborate defense of Dante for making thus an exposition of Metempsychosis. If, living scarce a generation or so after Dante, he had any suspicion of the indebtedness of his great predecessor to legends of Mahomet, his defense would have been still more elaborate. Dante, after his death, was charged with heresy and sacrilege, but not that they were of Islamic origin.

However, it is more in line with our subject to take note that before Dante's time in the prae-Renaissance there were other ideas of the origin of light, more circumstantial though less poetical than appear in his poems. We have seen this as fire-worship disappearing behind Heraclitus and Zoroaster in the prae-history of sun worship, but Bartholomew of England[26] (1230?) drawing on the authority of St. Augustine among others declares light is a distinct substance created three days before the sun and moon which do but reflect it and in this again we are privileged to suspect the reflection of Pythagoras, whence St. Augustine may have had it, via the neoplatonists. Both he and Albertus Magnus after him felt freer doubtless in quoting from St. Augustine than in deriving their science from Pythagoras, since so much of the latter's wisdom came through the Arabians, but they felt at liberty to criticize him for putting souls in stones on the strength of the phenomena of the loadstone. When they got hold of a bit of supposedly correct Pythagorean science they credited it to St. Augustine, but the incidents serve to illustrate how the supposed concepts of Pythagoras were alive in the minds of the Middle Ages. Indeed Arnold of Villanova passed for the adept of a Pythagorean sect which extended through Italy. He and Guido Cavalcante, Dante's friend, both had trouble about their skepticisms as to orthodox beliefs and if in the Romaunt of the Rose (1225-1282) the author was familiar enough with the Arabian Albumansor, Dante was probably as wise, but the theories of Pytha-

[24] XIII, 101-2.

[25] *Il Comento di Giovanni Boccacci sopra la Commedia*, Lezione 49.

[26] Thorndike, Lynn, *A History of Magic and Experimental Science*. 2 vols. MacMillan, New York, 1923.

goras were, as we see, accessible to him, without direct resort to the Arabians.

It is not, however, for the modern student to forget on how exceedingly slender a basis of fact rests our knowledge of Pythagoras and his doctrines. In the *Convivio*[27] Dante makes formal mention of Pythagoras, but places him as far back as 750 B. C. instead of 550 B. C.—"one whom people now name for his fame", but he gets him mixed up with Solon and Socrates. If, however, he could have had his information direct from Diogenes Laertius his knowledge would have been open to ancient and modern criticism which has almost relegated Pythagoras and his views to the realms of pure myth. However much we may feel inclined to doubt and reject any specific portion of it the circumstantial evidence has some cohesiveness and claim to probability. Asia was the land of religions and of Zoroastrianism probably in the age of Pythagoras, we know now from other than classical sources. Before he came into Italy from Samos, Diogenes Laertius puts him in contact with the Chaldeans as well as with the Egyptians and according to Plutarch the legends in his day made him also descend into Hell. So he was a person at least of wide and varied experience and when we think of his reputed travels, with our present knowledge of the history of religions we find it quite natural for Plutarch to note that he held the view that the nature of the soul is light. So whether or not we are to believe with Asin that Dante and Dante's age got their knowledge and their inspiration through the Arabians, we can scarcely avoid the conclusion that ultimately it came as to light through Pythagoras from the land whence a thousand years later sprang the creed of Islam and the race of Mahomet.

[27] *Il Convivio*, XI, 15.

THE FAITH OF HUMANISM

BY CURTIS W. REESE

THERE is a large element of faith in all religion. Buddhism has faith in the inexorable laws of Karma; Mohammedanism in the unyielding will of Allah; Confucianism in the moral nature of Heaven; Christianity in the love of God; and Humanism in man as the measure of values.

There is a large element of faith in all philosophy. Idealists have faith in eternal values; Realists in the objective reality of facts; Nathuralists in an inner survival urge; and Pragmatists in the workableness of truth.

There is a large measure of faith in all science. Faith in the orderliness of nature and in man's mind to comprehend it make science possible. There could be no science if we began with chaos on the part of the universe and incompetency on the part of man.

There is a large element of faith in all human relations also. The foundations of government, the warp and woof of economic relations, and especially the very structure of the home, partake in large measure of the nature of faith.

Hypotheses, postulates, and assumptions in their proper realm are comparable to faith in the realm of religion. In other words, faith is the working basis of religion. In this way I speak of the faith of Humanism.

Competent philosophers, scientists, and even theologians, regard working assumptions as tentative. They constantly check for error; they diligently gather new data and re-examine the old generalizations in the light of the new facts. They welcome criticism and verification from competent persons. Their faith is consciously experimental. And it is thus with the faith of the Humanist.

Humanism aims to comprehend man in his total setting; to know him as a child of the cosmos, as the individual members of the human group, and as the parent of civilizations yet to be. It sets as its definite goal, not knowledge for its own sake but knowledge as a means to the enrichment of human life. Here it attacks its problems with evangelical fervor and summons to its cause all knowledge, all faith, all hope, and all love.

Let us sketch the faith of Humanism in broad outline and see what it has to offer those who are not satisfied with the form and content of the old theology.

I

In the first place, Humanism has faith in the trustworthiness of the scientific spirit and method; viz., freedom of inquiry and controlled experiment. Fundamentalism is skeptical of science; Modernism merely flirts with science; but Humanism says that, while science may give us inadequate knowledge, it gives all we have and we must make the most of it. Upon science and the legitimate inferences from its established facts we are dependent for our knowledge of the nature of the universe, of the evolution of life, and of man's prowess and possibilities. And how stimulating yet sobering it is to contemplate the universe of modern science.

(1) With the destruction of the old cosmologies went many a man's sense of being at home in the universe. For vast multitudes the very foundations of the deep were shaken. The ships of the mighty went down, and only the skiffs of the tough-minded remained afloat. Hence the first task of any religion today is to face with utter frankness the cosmic situation that confronts the modern mind; to marshal such evidence as modern science reveals, examine and evaluate it, and determine to what extent it upholds human hopes.

The revelations of science have given us not a smaller but a bigger universe; not a simpler but a more complex universe; not a poorer but a richer universe.

(2) Astronomically, the old universe was a child's plaything; the new is immense beyond description. Estimates of competent authorities present startling figures. From one side of the earth's orbit in a straight line to the other is 185,000,000 miles. It would take a cannon ball five hundred years to go in a straight line

from one side of our solar system to the other. The earth travels around the sun 580,000,000 miles a year. The volume of the sun is one million times greater than the earth. But these figures are only introductory, for they belong to our little solar system. Our sun is a star; and the universe contains millions more, many of which may have their own planetary systems. The nearest star to our earth is four light years; i. e., twenty-four trillion miles away; and some of the most distant stars three hundred light years; i. e., three hundred times six trillion miles. A ray of light traveling 186,000 miles a second would require fifty thousand years to travel from one side of our universe to the other. And, wonder of wonders, it is thought by reputable astronomers that there are still other universes outside our restricted universe, which constitute a super-universe; and that many super-universes constitute an hyper-super-universe, etc.

(3) For the sake of completeness, one might also mention in contrast with the infinitely large the infinitely little, the universe of the atom with its whirling electrons. But mere mention is sufficient for our present purpose. While neither mere bigness nor mere littleness constitutes value, still we may well consider the delicate balance and super-wisdom of it all, and add this to our faith that human aspirations are grounded in reality.

(4) Coming nearer home, consider the evidence of geological knowledge. Scientific authorities estimate that life has been on this globe a thousand million years and that the age of the earth itself is some small multiple of a thousand million. They show how age after age this whirling globe has picked up stray matter; brought forth the germ of life; and how life has been fruitful and multiplied manifold, producing species of wondrous complexity and marvellous intelligence.

(5) In a most impressive way, the late Jenkin Lloyd Jones once vividly outlined a scale of the vast epochs of the world's history. Borrowing the suggestion and a part of Dr. Jones' collection of facts, I have laid out the creative periods on a scale of one hundred units. On this scale, it takes fifty units to represent the growth of the earth in what Haeckel styled the "tangled forest" period, during which the only vegetation was in the water and the only animals the skulless creatures of the sea. We add thirty-three and one-half units for the period in which ferns appeared on land and fishes in the deep; eleven units for the period

in which pines and reptiles appeared; four units for the period when the mammals appeared and the young were brought forth alive and the period of infancy prolonged,—the period of leafed forests, of birds and animals. Bringing the scale up to the present time, we add one and one-half units to represent the modern period during which man has appeared and has begun to assume his responsibility in the creative process.

In man, then, is the fruitage of what Aristotle called "the inner perfecting principle," of what Lamarck called "the slow wishing of the animals," of what Darwin called "natural selection." In him is the fruitage of age-long mother love, paternal care, and communal life; of an age-long struggle to liberate the fore limbs, to swing hands on flexible wrists, and to develop the throat to the point of speech.

Then this small fraction of the ages that man has occupied on the earth may itself be subdivided into units of time, as is done by James Harvey Robinson, so that on a scale of fifty units civilized man occupies only the last unit. At the very apex of nature's achievements stands modern man. Back of him and underneath him are the positive forces of life urging him on and on to greater achievements. The ages gone look up to him; ages yet to come beckon him onward.

Man is fortunate in that he is the heir of ages past; he is promising in that he is the parent of ages yet to be.

And so scientific knowledge gives strength to the wings of the poet: "What a piece of work is man! How noble in reason! how infinite in faculty! in form and moving, how express and admirable! in action how like an angel! in apprehension, how like a god!"

II

In the second place, Humanism has faith in the capacity of man increasingly to understand the universe and his place in it.

(1) It is true that we do not know very much about any one of the many things that call from the depths of the atom, or from the immensities of space. We do not know what life is, nor how a bit of protoplasm carries within it the potentialities that subsequent development proves to be there.

But however inadequately may be man's capacity to understand the universe, there is no other vessel of information. There

is no valid oracle of knowledge. There is no verified revelation of reality. There is no yoga-short-cut to wisdom. Man by means of his own science must unravel the skein of existence if he would weave the fabric of knowledge.

Admitting our lack of information, it is still true that man has demonstrated his capacity to understand with increasing accuracy and clearness the nature of his world and of his relation to it.

(2) Consider to what extent knowledge has grown. It is a long journey from primitive man's capacity to understand that one thing added to another thing made two things to the intricacies of Relativity and the quantum theory; from alchemy to creative chemistry; from astrology to astronomy; from the ancient medicine man to the modern physician and surgeon; from impulsive impression to inferential logic; from magic to science; from individual government with a club to the nation's representatives in conclave at Geneva. But the journey has been made.

(3) The people at large have not until recently understood what marvels of knowledge have been piling up. Heretofore, information has not been popularized. But now expert authorities are putting information within reach of all, and the avidity with which it is grasped evidences the capacity of great numbers to understand complex matters when stated in terms with which they are acquainted. Valuable service of this kind is being rendered by E. E. Slosson. Consider also *Why We Behave Like Human Beings,* by George A. Dorsey; *Microbe Hunters,* by Paul de Kruif; *Psychology Lectures-in-Print,* by Everett Dean Martin; and *The Story of Philosophy,* by Will Durant.

(4) It is thought by some philosophers that we are actually nearing the solution of the age-old body-mind problem. And certainly the current tendency to lay aside both the materialistic and the animistic hypotheses in favor of the organic theory of the nature of life points in this direction. Some scientists believe that we are nearing the understanding of the very nature of life itself. And capable experimenters are placing their instruments at the very gate of death. These doors may never be opened. But in view of man's past record in prying into the unknown, it is a daring man who will predict that any doors are closed forever.

III

In the third place, Humanism has faith in the ability of man

increasingly to achieve the possibilities inherent in the nature of man and the universe.

(1) In his control of nature's modes of operation, man is skillful and masterful. As an everyday affair he makes power that was once thought to dwell only among the clouds, and to be the exclusive possession of the gods. From the depths of the earth he brings forth riches untold. The physical world is beginning to do man's bidding. Not less wonderful is man's understanding of psychological laws. We are beginning to know how to predict and compel results. We now know that within certain limits public opinion and public conscience are subject to human control.

As man learns more and more about nature's processes—both physical and psychological—he learns that human intelligence is a co-worker with nature's processes.

(2) In his origination and development of moral ideas, man is wise and farseeing. As man has needed moral ideas for his advancement, he has achieved them. Moral ideas have never been handed down from heaven in systematized code, though such has been thought to be the origin of both the Hammurabic and the Mosaic codes. When man needed the moral idea of private property, he achieved it; then he who took that which belonged to another became a thief. When man needed the moral idea of communal property, he achieved it; then he who thrived by monopoly became a social parasite. When men needed the moral idea of the sacredness of human life, he achieved it; then he who killed another became a murderer. Man achieves his moral ideas; and when he gets done with them he replaces them with more and better ones.

Man has originated moral ideas that were for the good of tribes and races, and has developed them with farseeing wisdom. What he has done, he will continue to do. I have no fear of the final moral breakdown of the world. Ideas and customs hoary with age may be thrown in the scrap heap of time, but the race will develop more and better.

(3) In his creation of spiritual values, man is hopeful and prophetic. Man achieves his spiritual values because he feels the need for them. He feels that he wants to secure more power in the pursuit of the good life. Hence, he has followed teachers who have proclaimed the more abundant life; he has made re-

ligions and has evolved magic and prayer. Out of the inexhaustible soul of man, in response to his needs, have come forth gods and devils, angels and demons, heavens and hell. These man has made at his will and destroyed when he would. Other values innumerable has he brought out of the depths of his being, personified and sent them forth to battle in his behalf. These spiritual creations of man are so real that they die hard. Aye, they refuse to die until put to death by some greater spiritual creation.

But man's past achievements are only preparatory. They have merely opened his eyes to the greater possibilities of the future. In his power to dream dreams and to see visions, man is potentially the creator of nobler things yet to be.

IV

In the fourth place, Humanism has faith in the possibility and the nobility of a mutualistic social order.

(1) The past in social theory has been divided largely between two views of the nature of proper social arrangements, both of which have been intolerant and bigoted. These views may be called, roughly: individualism, on the one hand, and socialism on the other. There are numerous varieties of each, but for general purposes we may say that individualism is the theory of trusting to social and economic laws that are supposed to make for and preserve private interests. In practice, this means the chance arrangement of social affairs. It is laissez-faire: that is, let things take care of themselves. It is the policy of non-interference of the social whole with its parts. Individualism at its best is good-natured rivalry; at its worst, it is social anarchy. And its strongest inclination is in the latter direction!

(2) Socialism, on the other hand, is the dogma of the relentless operation of economic determinism, of class conflict, and of cataclysmic events. It is the tyranny of the many over the few. It is doctrinaire. It fits facts into theories instead of evolving theories out of facts. It is political "fundamentalism." There is no social salvation outside its pale. It will play in its "own back yard" or nowhere at all.

Both of these theories are political blind alleys.

(3) But mutualism embraces whatever is valid in individualism and socialism. Giving full value to the individualistic impulses of human nature, mutualism recognizes the social im-

pulses as well. It finds in natural life, not only the struggle for personal well-being but also mutual assistance.

In practical operation, mutualism is experimental democracy. Its plans are mobile. It is genuinely scientific; it says let us try this thing and see how it works.

Humanism holds that the religion that would be useful in this new day must be neither individualistic nor socialistic, but mutualistic. It must seek to weave the best personal values into a noble social order. It cannot preach a gospel that is purely personal nor one that is purely social; it must preach a gospel that will help to balance personal and social impulses to the end that individual man shall experience within himself the harmony of his impulses, and mankind be organized for the harmonious development of all the races of the world. Such a religion is now finding expression here and there among all churches and all religions and in the lives of manw who are not associated with any religious movement.

Humanism is bringing into the light of day a religion of, by, and for the whole man and the whole world.

THE NAMES OF THE ARCHANGELS

BY ELLEN CONROY MCCAFFERY, A. M.

SHOULD people render homage to the angels? The answer to this question proved to be one of the vexed disputes between the Puritans and the Catholics. The Puritans refused even to use the prefix of saint to the archangels regarding such a Pope-made honor as either presumption or desecration. They pinned their faith on the words in Revelations: "And I John saw these things and heard them, and when I had heard and seen, I fell down to worship at the feet of the angel which showed me these things. Then said he to me, 'See thou do it not for I am thy fellow servant, and of thy brethren the prophets and of them which keep the sayings of this book: worship God'."

John thus was rebuked when he would show divine honor to the angel, for John though still in the flesh was accounted a brother by the angel. It was one more way of saying that the measure of a man is the measure of an angel. (Rev. xxi.) The church has always stated that the angels are help mates and fellow workers of us all and we can ask their aid in our enterprises. We can render them full homage: we know they are far higher beings than ourselves, yet with all this we need be in no danger of confusing them with the Eternal One.

According to the artists of the Middle Ages there were nine orders of angels though I have sometimes seen them represented in three circles round the throne of God. The three divisions are Councillors, Governors and Ministers. The nine orders, according to Dionysius the Areopagite in his *De Coelestia Hierarchia*, are Seraphim, Cherubim, Thrones, Dominions, Powers, Virtues, Principalities, Archangels and Angels. The modern world, however, uses the term archangel for all the orders above that of angel. It has often been argued that there ought to be a tenth order, that of the

beatified souls of just men, but if you would have understood what is meant by the measure of a man being the measure of an angel, you will see that this tenth order is unnecessary. John saw these beatified souls clothed in white robes and on asking them who they were was told: "These are they which came out of great tribulation . . . therefore are they before the throne of God, and serve Him day and night in His temple, they shall hunger no more . . . "

The whole of the Scriptures is full of this belief of the ministration of angels: Why? Well, because there are such beings. Read the records of the apostles after Jesus left them. Did not angels succour them? Did He himself not say that He could have their help if He so desired? In the Old Testament angels help Abraham, Jacob, Moses, Elijah, Elsisha and many others. Curiously enough they are hardly ever recognized as angels until after the visit. They do not appear to have been winged. Certainly they were always male angels. Modern pictures rarely represent angels without wings and painters of today seem to prefer female angels. All ancient peoples seem to have believed in the ministration of angels. Hesiod, a Greek, seven hundred years before Christ speaks of:—

"Aerial spirits by great Jove designed
To be on earth the guardians of mankind.
Invisible to mortal eyes they go,
And mark our actions good or bad below
Th' immortal ones with watchful care preside
And thrice ten thousand round their charges glide
They can reward with silver or with gold
Such power divine permission bids them hold."

Our own poet Spencer sings most beautifully of the work of angels in Book Two of the *Faerie Queen*:

"Oh th' exceeding grace
Of Highest God that loves His creatures so
And all His works with mercy doth embrace
That blessed angels He sends to and fro
To serve to wicked man, to serve his wicked foe.
How oft do they their silver bowers leave
And come to succor us that succour want!
How oft do they with shining pinions cleave
The flitting skies, like flying Pursuivant

Against foul fiends to aid us militant!
They for us fight, they watch and duly ward
And their bright squadrons round about us plant.
And all for love and nothing for reward,
O! why should heavenly God to man have such regard?"

The great hosts of angels are led by seven great ones, though in the Scriptures the names of only two of these are given, Michael and Gabriel. In the Apocrypha there are Raphael and Uriel. Yet the names of the angels are well known throughout Europe and Asia for formerly much more interest was taken in them than today. The astrologers said that each one of the seven ruled one of the seven planets, and as the planets are likenesses of all that is in the universe, so the seven spirits stand in their highest concept as the Elohim. The Rosicrucians say that the light we see from the planets is all we see of their bodies. Gabriel always seems the nearest to us, and so he is. He is the angel of the soul. His name means God's power. He brings the messages of God to man. He works largely through the inspirational mind. He it is that brings the message to Mary that she shall bear Christ, thus he is sometimes called the angel of the Messiah. By the Persians he is called the Angel of the Revelation, because he is so often employed by God to reveal great truths to man. The Kabbalists called him the Man-God because the soul has this duality in itself of aspiring unto God, yet being man, thus Gabriel is ever urging and helping the soul upwards. He is ready when asked, to make the dark things clear. You remember when Daniel could not understand his vision, God said, "Gabriel, make this man to understand the vision", and Daniel, though at first somewhat frightened, soon lost his fear in the sweet understanding of the great message. The Mohammedans say he dictated the Koran to Mahomet. He is also said to have led them to their early victories.

Gabriel is also said to be the Angel of the Spirit of Truth, the eternal truth which is true in all ages, which transcends the mere facts of the moment. He is the angel who gives vision and where he has to withhold the vision the people perish, for there is no divine inspiration and message coming to them.

Longfellow in his "Golden Legend" gives the work of the great planetary angels. He makes Gabriel say:—

"I am the angel of the Moon:
Nearest the earth is my ray

That best illumines the midnight way
I am the angel of Hope."

Thus we should always ask Gabriel to give us hope and strength until the Day-Star awake in our hearts.

The strangest mediaeval conception of Gabriel was that of the divine huntsman. On many old engravings and in pictures we can see Gabriel represented as a huntsman with four dogs following in the chase. Sometimes these are labelled Veritas, Justitia, Misericordia and Pax. Gabriel is hunting the unicorn. We must here remember that the unicorn was a favorite symbol of Christ,—thus how beautifully did the men of olden time portray the quest of the soul for the spirit of life. By divine guidance we hunt for the Christ helped by Truth, Justice, Pity and Peace. Sometimes in these pictures the unicorn is portrayed as rushing so violently into the garden of the Virgin Mary that it seems he will pierce her breast showing that the Christ searches for the soul as well as the soul being in search for the Christ. Gabriel is sometimes said to be the Angel of the West, since the West is the home of the soul.

The name Michael means "Like Unto God." Sometimes Michael is portrayed as a young man in beautiful white robes, but more usually he is in shining silver or gold armour holding a great sword. In this latter case it is difficult not to mistake him for St. George. Michael fought the great fight against the dragon just at St. George did or Horus of Egypt or Apollo of Greece, or Thor of Scandinavia or Hu of Wales or Indra of India. Michael stands for the divine all knowing mind. In his lesser aspects he is the angel of prudence. The Jews accept him as this and he is their chief angel. They remember the words of Daniel concerning Michael, "And at that time shall Michael stand up, the great prince, which standeth for the children of the people." He was said to weigh the deeds of the souls of the departed and then if their good deeds outweighed the bad he would lead them to the gates of heaven. Now this had been also the office of Mercury, Hermes and Thot. What does it all mean but that the divine spirit of Wisdom is also Justice? We cannot cheat the eternal verities, externals are nothing. It is this all seeing justice that will place us in the next world.

You will find that most of the hills and the churches on the hills in Europe are sacred to St. Michael. In Cornwall is St. Michael's Mount, and across the Channel is Mont. St. Mihiel. In the same way high places were sacred to Mercury, Hermes and Thot. In

South London is Tooting where Thot worship was once carried on as it was at Toot's Hill in Epping Forest or at Tewkesbury. When we sing, "There is a green hill far away" we do not realize the vast symbolism built round this hill of the Lord by almost every nation.

Sometimes Michael in his capacity of Judge of the Dead carries a scroll or book which makes us think of the "Lamb's Book of Life". How ridiculous says the sceptic to say that there can be any record of our lives and thoughts, when we ourselves forget these experiences. Occult experience however proves that this is not so, that there are world records of everything that has happened. Psychometrists can, to a certain extent, tell the life history of an object placed in their hands. Under abnormal circumstances people are able to recall and tell all kinds of information that they had completely forgotten in the normal life.

We are not surprised then that astrologers assign Michael the governorship of the planet Mercury. In books and in sculpture I have sometimes seen him assigned to the Sun, but this is incorrect. Longfellow makes him say:—

"The planet Mercury whose place
Is nearest to the Sun in space
Is my alloted sphere.
And with celestial vision swift
I wear upon my hands the gift
Of heavenly prudence here."

Michael is also the governor of the South and as such carries the spear rather than the sword. The Roman Catholics call him Sanctus Michael Signifier and say that at the Last Judgment he will show the cross, the nails, the spear and the throne.

Raphael means God Healeth, so that Raphael represents the Divine Physician who comes to us with healing in his wings. He is the angel of the Sun and of the East. It is from the sun that all healing comes and from the East that the glory of the Lord comes. Raphael is usually represented as a pilgrim for the Sun is the Great Pilgrim. He carries a staff and sometimes a fish. This latter is said to be given him as an emblem because in the Book of Tobit he befriends the young Tobias and makes the fish minister to his good instead of his harm. When the young man's father would have paid him he says: "I am one of the Seven Spirits which present the prayers of the saints and which go in and out before the glory of

the Holy One . . . not of any favor of mine I came, but by the will of God I came, wherefore praise Him forever."

The staff of Raphael, though merely a pilgrim's staff, is really the sun's sceptre of rulership. It is the symbol of the spirit force of the Lord of the East. Milton called him the "social prince". All through *Paradise Lost it* is Raphael who talks so kindly and gently to Adam and Eve and explains their estate to them. At the same time Milton does not lose sight of his majesty and attributes of power, hence we get that wondrous description of him in Book Five:

"Six wings he wore to shade
His lineaments divine; the pair that clad
Each shoulder broad came mantling o'er his breast
With royal ornament: the middle pair
Girt like a starry zone his waist, and round
Skirted his loins and thighs with downy gold
And colors dipped in heaven; the third his feet
Shadows from either heel with feathered mail,
Sky-tinctured grain. Like Maia's son he stood
And shook his plumes, that heavenly fragrance filled
The circuit wide."

Raphael has always been loked upon as the guardian of the whole of mankind. The people of the Middle Ages said that it was he and the angels under him who sang the song to the Shepherds: of Peace on earth and good will to men. Longfellow makes Raphael say:

"I am the angel of the Sun
Whose flaming wheels began to run
When God's Almighty breath
Said to the darkness and the night
Let there be light and there was light
I bring the gift of Faith.

The fourth great angel is Uriel, the light or fire of God. Milton calls him the sharpest sighted spirit of all in heaven. He is sometimes called the Regent of the Sun and is the angel whom John saw in the Sun. Astrologers call him the angel of Mars and thus Longfellow puts the following words into his mouth:

"I am the minister of Mars
The strongest star among the stars
My songs of power prelude
The march and battle of man's life
And for the suffering and the strife
I give him fortitude."

Uriel is the angel of the Lord who appeared to Moses in a flame of fire out of the midst of the bush. It was only by means of the divine fire that Moses was able to carry out his superhuman task. The planet Mars rules over those who are pioneers and who have hard battles to fight. Uriel is able to give the enthusiasm and the divine uplift that can carry even a physically weak person to victory. Uriel in his highest aspect is the pillar of fire that guided the Israelites across Mount Sinai. He is the Shechinah of the Presence.

Fire was an attribute of God originally though the modern theologians have given it to the devil. The ministers of God have to be baptised with the Holy Spirit *and with FIRE*. Tongue of fire were the sign of the presence of the Holy Spirit at Pentecost. Malachi likens God to a refiner's fire for in the fire of God all that is not pure must be burnt away from the soul. When Jesus re-appeared to His disciples He had the fire made and the fish laid thereon to show that He ever has the fire, the sacrifice and the food for the disciples who are ready to follow his path and to feed his sheep. Vaughn in his deep mysticism realised this when he says:

"God's saints are shining lights: who stays
Here long must passe
O'er dark hills, swift streams and steep ways
As smoothe as glasse;
But these all night
Like candles shed
Their beams, and light
Us to our bedd
These are indeed our Pillar Fires
Seen as we go;
They are the cities' shining spires
We travel to."

Uriel is the angel of the north, the direction of cold, of difficulty and trials, but if we face the north valiantly we also face the great Pole-Star which is symbolic of the unchangeable everlasting God. As Dante says:

"Then heard I the echoing from choir to choir
Hosannah to the fixed point."

In the Book of Enoch we have another reference to him: "Then Uriel showed me twelve gates open for the circuit of the chariots of the O in Heaven, from which the rays of the O shoot forth.

It was Uriel who helped Esdras to recollect the lost Scriptures, thus again he connects with the Holy Spirit "who shall teach you all things and shall bring all things to your remembrance." The Early Church said it was Uriel who led the disciples to Emmaus which means the hot springs and was the place where they again saw Jesus.

The angel of Venus is Anael or Israfel. We all know the beautiful poem of Edgar Allan Poe on the Angel Israfel:

"In Heaven dwells a spirit
Whose heart strings are a lute
None sing so wildly well
As the Angel Israfel."

It is the strains of this angel and of those under his care that we hear in our dreams or in our moments of communion with the unseen world. It is said that at the last day Israfel will sound the Resurrection trump and then Michael will call all men to judgment. Until then he delights the souls of the blessed with sweet music. Anael means the Sweet Song of God and is the spirit of all art, for art is beauty and beauty is one of the approaches unto God. We have to worship in the beauty of Holiness. So many people forget this.

Both Anael and Israfel are said to greet the souls of heroes and sing their praises: "A winged band commanded by Israfel, the angel of the Resurrection, came to meet Roland."

We must be careful not to confuse Israfel with Azrael who is the angel of death. He is the angel who looks after the dying and helps them. Walter Besant speaks very beautifully of "those who listen in the watches of the night for the wings of Azrael". Perhaps you know the beautiful Dream of Gerontius where the angel tells the dying man to be patient and—"I will come and wake thee on the morrow." We know that to many who are dying it seems as though the gates of the next world were opened and they speak of old friends as though present and of glorious angels around. Such is the work of the angels of Azrael, but it is said that Azrael himself will die in the end—after the second trump, which is but another way of

stating that eternal truth, "There shall be no more death."

The angel Oriphel, whose name means the Hour of God, is attached to the planet Saturn though some people give Cassiel. It is Saturn who hinders and delays our works until the hour of God is ripe. Thus we look upon Oriphiel as an angel to be dreaded and feared whereas if we could but trust God to know the times and the seasons we should see that Oriphel was as beautiful, perhaps more so, than any of the other angels. We see so dimly and imperfectly now that we are continually in fear both of the governorship of our petty lives and for the guidance of mankind. God has great lessons to teach us—sometimes he has to hammer us into shape—sometimes He leads us—not the nearest way but by way of the wilderness. At the end we are to come into Canaan, the land of milk and honey,—the milk of human kindness and the honey which is the food of the gods, and what is the food of the Gods but spirituality?

Zacchariel means the Man of God, and is the ambassador of the planet Jupiter. When we come under this angel we do not need so much the hard lessons that Saturn has to teach. We have become more kindly, more generous, more open hearted and so we are more able to become leaders of men and more able to help humanity. This is what we have to strive after, each one of us to let the spiritual child within us grow and so become friends with man and with God.

There is an Eastern proverb which says "To every Moses there is a Pharoah. When Moses was struggling with Pharoah and he and the people were delayed, they were under the influence of Saturn. When the lessons of Egypt were learnt they then came under the influence of Jupiter and were allowed to go on their way. The sign of Saturn is the sign of Jupiter reversed.

Such then according to art and tradition are the names assigned to the seven great angels of the planets:

Gabriel—the Moon.
Michael—Mercury.
Raphael—the Sun.
Uriel—Mars.
Anael—Venus.
Orifel—Saturn.
Zacchariel—Jupiter.

According to the Kabbalah, they are assigned as follows:

Tzadkiel—Jupiter.

Samael—Saturn.
Michael—the Sun.
Haniel—Mars.
Raphael—Venus.
Gabriel—Mercury.
Sandalphon—Moon.

The meanings of the names of some of the other great angels is very illuminating:

Ariel—the Lion of God.
Ramuel—exaltation of God.
Abdiel—the servant of God.
Ithuriel—the discoverer of God.
Zephon—the searcher of secrets.
Uzziel—the strength of God.
Azazel—brave in retreat.
Jophiel—beauty of God.
Samael—the severity of God.
Salamiel—acquired of God.
Zadkiel—righteousness of God.
Chamuel—the wrath of God.

DIFFERENTIATION OF INDIAN CULTURES ACCORDING TO GEOGRAPHICAL AREAS

BY DR. GEORGE H. DAUGHERTY, JR.

WHILE admitting the basic unity of Indian culture, scientists have discovered well defined variations in different parts of the country. On the evidence of material culture characteristics and archeological finds they have traced a close connection between the environment of a given locale and the culture of the indigenous tribes. The purpose of the present article is to demonstrate first that there are distinct differences in the culture originally found among the Indians living in localities of different environment; second, that these differences were caused by the environment and reflect it. Three of these cultural areas, already mentioned as the Great Lakes section of the Eastern Woodland Area, the Plains area, and the Southwest area, will be contrasted in the matter of physical environment, material culture of resident tribes, and subject matter of literary expressions of these tribes.

Archeological and ethnological research has divided the American continent into several "culture areas", or separate geographical divisions. In each of these the climate, topography, fauna, and flora constitute a distinctive environment. Each of these major environmental or cultural areas seem to have produced its own peculiar type of culture among the tribes who lived within its limits. Tribes who left one area and entered another tended to drop their former folk-ways and adopt those prevailing in the new environment. For instance the kind of food, the manner of hunting, type of weapons or of houses would obviously be determined by available natural resources.

The culture map, (reproduced here) of W. H. Holmes, archeologist, reveals eleven cultural areas north of Mexico. Clark Wissler, ethnologist, has prepared a similar map (also reproduced here) with

nine areas. Although the maps agree quite closely, the divisions of Wissler are, for literary purposes, more convenient. His decision is based on related "material culture" characteristics, such as food, shelter, transportation, etc., which are more frequently and plainly reflected in songs, speeches, and rituals than the archeological findings of Holmes. The criteria of the latter include: type of buildings, methods of burial, ceramic arts, types of stone and bone weapons and other implements, few of which are discriminated with accuracy by the Indians in their compositions.[1]

The problem of dividing the continent into a definite number of geographical areas which produced separate types of culture is, for several reasons, a difficult one. Although the experts Holmes and Wissler agree fairly well in the larger divisions west of the Mississippi river, they are by no means in accord as to the number of distinctive areas in the east and south. The following table indicates

[1]The complete topical list of data used by Wissler in characterizing the material culture of an area is of sufficient interest to be reproduced here:

1. Food: *a*, methods of gathering and producing vegetable foods; *b*, hunting; *c*, fishing; *d*, agriculture and domestication; *e*, methods of cooking; *f*, manufactured foods (Details of methods and appliances in every case.)
2. Shelter: details of structure for *a*, seasonal types; *b*, permanent types and *c*, temporary shelters.
3. Transportation: methods and appliances for land and water.
4. Dress: materials and patterns; sex differences, *a*, headgear and hair dress; *b*, footgear; *c*, handgear; *d*, body costume; *e*, overcostume.
5. Pottery: methods of manufacture, forms, uses, colors, technique of decoration.
6. Basketry, mats, and bags: materials, kinds of weave, forms, uses, technique of color and decoration.
7. Weaving of twisted elements: materials, methods of twisting thread and cord, weaving frames or looms, technique of dyeing and pattern-weaving, kinds and uses of products.
8. Work in skins: *a*, dressing, methods, and tools; *b*, tailoring and sewing; *c*, technique of bags and other objects; *d*, use of rawhide.
9. Weapons: bows, lances, clubs, knives, shields, armor, fortifications, etc.
10. Work in wood: *a*, methods of felling trees, making planks, and all reducing processes; *b*, shaping, bending, and joining; *c*, drilling, sawing, smoothing; *d*, painting and polishing; *e*, use of fire; *f*, tools; *g*, list of objects made of wood; *h*, technique of carving.
11. Work in stone; processes, forms and uses.
12. Work in bone, ivory and shell.
13. Work in metals.
14. Feather work, quill technique, bead technique, and all special products not enumerated above.

For more complete details see statements by the two leading experts in this field: Clark Wissler, "Material Culture Centers of the North American Indians", *Anthropology in North America*, pp. 76 ff., especially pp. 77-78; and "Correlation Between Archeological and Culture Areas in the American Continent", *Holmes Anniversary Volume, Anthropological Essays*, Washington, 1916, pp. 481-490. W. H. Holmes, "Areas of American Culture Characterization" etc., in *Anthropology in North America*, pp. 42 ff. Otis T. Mason, "Environment", *Hodge* I, pp. 427-430.

Artifact (Archaeological) Areas According to Holmes

Material Culture Areas According to Wissler

the areas in the east and south. The following table indicates the areas selected by Wissler as compared with those of Holmes:

Areas of Wissler	Areas of Holmes.
1. Eskimo (Arctic Shoreland) Area.	No. X
2. Mackenzie Area.	Part of No. XI
3. North Pacific Coast Area	No. IX
4. Plateau Area	No. VIII
5. California Area.	No. VII
6. Plains Area	No. V
7. Eastern Woodland Area	No. IV and part of No. I
8. Southwestern Area	No. VI.
9. Southeastern Area.	No. II and III, and part of No. I[2]

Since the purpose of the present discussion is literary, not archeological or ethnological, a complete statement regarding environment and material culture will not be given here. The latest conclusions regarding material culture and environment are, however, both interesting and pertinent.

"The striking agreement between culture and artifact areas

[2]See W. H. Holmes, "Areas of American Culture Characterization" etc., pp. 42 ff. Clark Wissler, "Material Culture Centers of the North American Indians", pp. 76 ff; and "Correlation Between Archeological and Culture Areas in the North American Continent", *Holmes Anniversary Volume, Anthropological Essays*, Washington, 1916, pp. 481-490, and Otis T. Mason, "Environment", *Hodge* I, pp. 427-430.

The fairly close correlation between Wissler's culture-trait map and the archeological areas of Holmes has been commented on by the latter. He points out that the cultures localized in the areas indiqated by Holmes must be the original and only ones there, "and that their development has been merely an expansion along their original lines." Follows a further explanation of the differences: "If the Iroquois were withdrawn and placed in the south whence they seem to have come recently, the mound peoples of Ohio reinstated, and the extinct Florida tribes revived, we should perhaps have a close agreement between the two maps."

The mound culture north of the Ohio river was probably an intrusion from the south. "Thus it seems that the chances favor there having been for a long time a tendency toward three culture areas in eastern United States; the northern, the southern, and the Gulf Coast." Most of eastern Canada from the point of view of material culture only "was continuous with the Diné area, which would bring it into close agreement with Archeological [Holmes] XI. . . . . Thus on both continents there is a very close general agreement between the locality occupied by the historic cultures and the archeological areas." —Wissler, "Correlation Between Archeological and Culture Areas in the American Continents", pp. 481-2.

cannot be due merely to one being continuous with the other, but must signify that cultures were scarcely ever *moved out of their habitats.* Languages seem to have travelled more, but the suggestion is that the somatic type was stable, or at least able to submerge all intruders. According to this interpretation, *cultures, somatic types, and to a considerable extent, languages as well,* grew up in single geographical areas, a condition giving us a kind of accidental correlation. . . . What we seem to have is a tendency toward identity within each geographical area, strongly marked in the case of culture, far less noticed in language but still in evidence."[3]

The stability of certain literary themes within these areas seems quite as marked as that of the culture and languages mentioned by Wissler. Although there are numerous cases of myths travelling from one area to another, the songs and speeches, on the contrary, remained quite permanent.

For the purpose of the present discussion analysis will be made of compositions from tribes representing three major areas (according to the map of Wissler): the Ojibway of the Eastern Woodland Area (No. 7), the Siouxans of the Plains Area (No. 6), and the Pima of the Southwestern Area (No. 8). The selection of areas was in large part determined by the fact that they exhibit very plain contrasts to each other. It is quite possible, even probable that Indian literature from all the areas of Wissler would plainly reflect the distinguishing characteristics of the environment in which it was produced. The space required in presenting selections from each of these areas would, however, far exceed the limits of this discussion. In any case, the areas mentioned afford for comparison a wide variety of culture types and levels, and also of compositions. It is believed that the evidence utilized here will be sufficient to prove several important points: the subjects of Indian thought and speech were invariably taken from the immediate environment; these subjects changed or were modified largely to reflect a new environment; traditions reflecting a former environment, though lingering for a time, finally became archaic and were forgotten; environment, material culture (the physical occupations and artifacts of the Indian), literary composition, are all closely related.

The territory occupied by the famous Ojibway tribe comprises a large part of the entire Upper Mississippi and Lakes Area (Wissler).

[3]Wissler, "Correlation Between Archeological and Culture Areas", pp. 487-8.

According to tradition the Ojibways, an Algonquian tribe, migrated westward from some point on the Atlantic seaboard near the Gulf of the St. Lawrence River. Their route lay along the St. Lawrence River, Lake Huron, to Fond du Lac on Lake Superior. It is reported that after a protracted stay at the falls of Sault Ste. Marie they separated from the Ottaways and Pottawatumees there, and separated into two large divisions. One of these occupied the country about the northern shore of Lake Superior, while the others went to the South. By dint of continuous fighting with the resident Sioux and other tribes they managed to spread out over an area including "all that portion of the state of Michigan lying north of Green Bay and west of the Straits of Michimilimackinac, bordering on Lake Superior, the northern half of Wisconsin, and the northeastern half of Minnesota. . . . . Besides this they occupied the country lying from the Lake of the Woods, over the entire north coast of Lake Superior, to the Falls of St. Mary's and extending even east of this point into Upper Canada. They literally girdled the great "Father of Lakes". . . . . They occupied, through conquest in war against the Dakotas, all those numerous lakes from which the Mississippi and the Red River of the North derive their sources."[4] They constituted one of the largest single tribes in North America; as late as 1905 their total strength was between 30,000 and 32,000. Earlier estimates varied somewhat, but were generally less than this number.[5]

The Ojibway territory was mostly forest and lake country. Warren, writing in 1850, describes it in poetic style. "The Ojibways reside almost exclusively in a wooded country; their lands are covered with deep and interminable forests, abounding in beautiful lakes and murmuring streams, whose banks are edged with trees of the sweet maple, the useful birch, the tall pine, fir balsam, cedar, spruce. . . . In many of these lakes which lie clustered together within an area of several hundred miles the wild rice grows in large quantities . . . . affording the Indian an important staple of existence.[6] Warren mentions Prairie Rice Lake, forty miles north of the lower rapids on Chippewa River, as typical Ojibway camping ground. "The lake being miry-bottomed, and shallow, is almost entirely covered with wild rice, ... so thick and luxuriant . . . . that the Indians are often obliged to cut passage ways through it for their bark canoes. From the manner in which they gather the rice,

[4]Warren, *History of the Ojibways*, pp. 37-8, and pp. 76 ff.
[5]*Hodge* I, *"Chippewa"*, pp. 279-80.
[6]Warren, *op. cit.*, pp. 175-6.

and the quantity which a family generally collects during the harvesting season, this lake alone would support a body of two thousand Indians. . . . . The country surrounding the lake is sparsely covered with pine trees, through which fires appear to have occasionally run, burning the smaller trees and thickets, and giving the country a prairie like appearance. . . . "[7]

In this territory of woods and lakes, they led a semi-hunting, semi-agricultural existence, depending on game, wild fowl, fish, and wild rice for subsistence.[8] They were also engaged in bitter warfare with the Iroquois, who attempted to invade them from the east, and with the Sioux, their ancient enemies, whom they actually ousted from the country to the west.[9]

The annual program of this tribe demanded that the spring and summer, when hunting was poor and the leaves afforded good protection, be seasons of regular hostilities. The scattered bands being united into larger settlements, the men spent their time in ceremonial dancing, raiding Siouan enemies, and other festivities. The women, "usual drudges of the wild and lordly red hunters", as Warren says, also enjoyed themselves "in making their lodge coverings and mats for use during the coming winter, and in picking and drying berries".[10] At this time, too, all those who had lost relatives at the hands of the Sioux held intensive mourning celebrations, with the view of inciting themselves to revenge.

In the autumn, after the wild rice had been gathered and stored (mostly by the women), the bands moved in a body to a designated rendez-vous "to search for meat on the dangerous hunting grounds of their enemies. . . . . Long Prairie . . . . was at this time the favorite resort of these bands of the Dakota tribes now known as the Warpeton and Sisseton. It was in the forests surrounding this isolated prairie, that herds of the buffalo and elk took shelter from the bleak cold winds which at this season of the year blew over the vast western prairies where they were accustomed to feed in summer; and here the Dakotas in concentrated camps of over a hundred lodges, followed them to their haunts; and while they preyed on them towards the west, the guns of the Ojibways were often heard doing likewise towards the east. The hunters of the two hostile camps

[7]Warren, *op. cit.*, pp. 308-11.
[8]Hoffman, "The Medewiwin", *7th Annual Report B. A. E.*, p. 149. Warren *op. cit.*, pp. 39-40.
[9]Warren, *op. cit.*, pp. 38, 163 ff., etc.
[10]Warren, *History of the Ojibways*, p. 265.

prowled after their game, "in fear and trembling", and chance encounters of Ojibways and Sioux resulted in frequent forays and assassinations.[11]

Scattered over a region 1000 miles wide from east to west, the Ojibway were divided into a large number of villages, bands, and local divisions. These (roughly) territorial bands were grouped into ten larger divisions or sub-tribes within areas. These in turn were organized into five major fraternities. Inside the ten subdivisions were numerous gentes (with representatives in most, or all local bands). Each of the gentes was named for an animal totem: Crane, Catfish, Loon, Bear, Marten, Reindeer, Wolf, Pike, Lynx, Eagle, Rattlesnake, Moose, Gull, Hawk, etc. The members of the gens, theoretically at least, possessed certain of the characteristics of the animal, their totem. The chief of these were the Crane, Catfish, Bear, Marten, Wolf, and Loon families, who composed eight-tenths of the tribe.[12] The interior cohesion of the whole tribe was very loose; concerted action of any sort being only temporary in time of war.

After a long series of wars with the Dakotas and with the British, the Ojibway finally ceded most of their valuable forest and mine lands to the Government. They are now on reservation in Minnesota and Michigan and Wisconsin to the number of nearly 18,000. Nearly 15,000 are also on reservation in Canada.[13]

Very striking reflections of the natural environment are seen in the council speeches of the Ojibway as reported by William Warren and, more recently, by Mr. Lew Sarett.[14]

Warren reports that he assisted at an Ojibway ceremony in which a sea shell figured prominently. On asking the meaning of this he received the following reply from an old medicine man.

"While our forefathers were living on the great salt water toward the rising sun, the great Megis (sea shell) showed itself above the surface of the water, and the rays of the sun were reflected for a long time from its glossy back. It gave warmth and light to the An-ish-in-aub-ag (red race). All at once it sank into the deep, and

[11] Warren, *op. cit.*, pp. 270 ff., and 127.

[12] Warren, *op. cit.*, pp. 29-50.

[13] *Hodge*, I, "Chippewa", pp. 279-280.

[14] Mr. Lew Sarett, of Northwestern University, is one of the most distinguished of Warren's successors in the study of Indian, particularly Ojibway, lore. He is the author of two collections of verse, *Many, Many Moons* and *The Box of God*. These are notable for being accurate and at the same time poetic transcriptions of Indian thought.

for a time our ancestors were not blessed with its light. It rose to the surface and appeared again on the great river which drains the waters of the Great Lakes, and again for a long time it gave life to our forefathers and reflected the rays of the sun. Again it disappeared from sight and it rose not, till it appeared to the eyes of the An-ish-in-aub-ag on the shores of the first great lake. Again it sank from sight, and death daily visited the wigwams of our forefathers, till it showed its back, and reflected the sun once more at Bow-e-ting (Sault Ste. Marie). Here it remained for a long time, but once more, and for the last time it disappeared, and the An-ish-in-aub-ag was left in darkness and misery, till it floated and once more showed its bright back at Mo-ning-wun-a-kaw-ing (La Pointe Island), where it has ever since reflected back the rays of the sun, and blessed our ancestors with life, light, and wisdom. Its rays reach the remotest village of the Ojibway."

On being quizzed further the old man explained that the shell symbolized the Me-da-we religion, or grand medicine ritual of the tribe. The appearance of the shell indicated the places where the medicine lodge had to be erected on the migration westward. The story undoubtedly has a deeper significance than this. It seems logical that the tribe once lived on the Atlantic coast.[15] In such a case, shellfish formed an important article of diet and were symbolic of all things most vital to the tribe.[16]

This speech shows plainly the effect on the Indian mind of those things most essential to his life. The wandering Ojibway deified the sea shell from which he derived his food; and imbued it with the magic properties with which all nature was (to him) endowed. The legend then became confused with religious rites in a fashion similar to that of the White Thanksgiving and Christmas beliefs and rituals. An inland tribe could never have originated this legend.

According to the "culture area" theories of Wissler and Holmes, a certain type of culture is indigenous to a given locale, and tends to impress itself upon newcomers there. The ritual and legend of the shell was therefore a last vestige of a former culture, carried over into the new area, and was fast being forgotten. According to Warren's account the speech of the ancient shaman was full of

[15]Warren estimates that the migration probably began shortly after the year 1300, and lasted for 200 years. See *History of the Ojibways*, pp. 88 ff.

[16]See N. C. Nelson, "Wixi of the the Shellmound People", *American Indian Life*, pp. 273-287, and Edward Sapir, "Sayach'apis, a Nootka Trader", *Ibid.*, pp. 297-323, especially pp. 302 ff., on importance of sea food to coast tribes.

archaic and obscure phrases, impossible to translate literally. Another and doubtless later version of the legend substitutes for the shell the otter, an animal indigenous to the newer environment of the lake country.

Conclusive proof of the tendency of the literary culture of the Indians to accord with other phases of their culture is seen in the sacred objects of the Omaha "tent of war". These objects, among them a sacred shell and a cedar pole, were carefully wrapped up and preserved by the ancient medicine men. The Omaha, a Missouri plains tribe, were supposed remotely to have migrated from some point far in the east. The traditions concerning the sacred objects were forgotten even by the ancient keepers, though the articles themselves were still blindly revered. Concerning the "sacred shell" Miss Fletcher, an authority on the Omaha tribe, remarks: "Shells were formerly used to carry coals of fire. In ancient ceremonies in which this shell had a part, it may have served such purpose actually or symbolically. That it was connected with fire seems probable from the superstition that it would cause great heat if it ever touched the ground. . . . . In the account of the shell society [a tribal fraternity] it will be seen that the shell was connected with death and the continuation of life after death, as well as with water and the beginnings of life. Osage myths associate the shell with the introduction of life on the earth.

If additional light is ever thrown on this Sacred Shell of the Omaha tribe it will probably be the result of study of some cognate tribe which may have preserved some tradition of a ceremony in which a shell of this kind was used.[17] To the present writer it seems quite likely that the Ojibway tradition is the explanation sought by Miss Fletcher. Both cases are illustrations of the analogous development and changes of material culture and literature. Thus the Indian, like the white man, tended to forget the old gods and the old myths as the conditions of his life changed.

A council talk by a speaker of the Ojibway Crane clan corroborates the evidence of the first speech. In answer to a vainglorious harangue claiming first place for the Loon family, the head chief of the Cranes, one Tug-waug-aun-ay, arose. Said he: "The Great Spirit once made a bird, and he sent it from the skies to make its abode on earth. The bird came, and when it reached half way down, among the clouds, it sent forth a loud and far sounding cry, which

[17]Fletcher, "The Omaha Tribe", *27th Rep. B. A. E.*, I, pp. 452-457.

was heard by all who resided on earth, and even by the spirits who make their abode within its bosom. When the bird reached within sight of the earth, it circled slowly above the great Fresh Water Lakes, and again uttered its echoing cry. Nearer and nearer it circled, looking for a resting place, till it lit on a hill overlooking *Boweting* (Sault Ste. Marie); here it chose its first resting place, pleased with the numerous white fish that glanced and swam in the clear waters and sparkling foam of the rapids. Satisfied with its chosen seat, again the bird sent forth its loud but solitary cry; and the No-kaig (Bear clan), A-waus-e-wug (Catfish), Ah-auh-wauk-ug (Loon), and Mous-o-neeg (Moose and Marten clan), gathered at his call. A large town was soon congregated, and the bird whom the Great Spirit sent presided over all.

Once again it took its flight, and the bird flew slowly over the waters of Lake Superior. Pleased with the sand point of Shaugh-ah-waum-ik-ong, it circled over it, and viewed the numerous fish as they swam about in the clear depths of the Great Lake. It lit on Shaugh-ah-waum-ik-ong, and from thence again uttered its solitary cry. A voice came from the calm bosom of the Lake, in answer; the bird pleased with the musical sound of the voice, again sent forth its cry, and the answering bird made its appearance in the wampum-breasted Ah-auk-wauk (Loon). The bird spoke to it in a gentle tone, "Is it thou that gives answer to my cry?" The Loon answered, "It is I." The bird then said to him, "Thy voice is music—it is melody—it sounds sweet in my ear, from henceforth I appoint thee to answer my voice in Council'."

"Thus," continued the chief, "the Loon became the first in council, but he who made him chief was the Bus-in-aus-e (Echo Maker), or Crane. . . . . "

The old man took his seat in silence, and not a chief in that stricken and listening crowd arose to gainsay his words. All understood the allegory perfectly well, and as the curling smoke of their pipes arose from the lips and nostrils of the quiet listeners there ascended with it the universal whisper, "It is true; it is true."

As an explanation of the figure in the above allegory, we will add that the Crane, ... is the totem of a large section of the tribe. The bird loves to soar among the clouds, and its cry can be heard when flying above, beyond the orbit of human vision. From this "far sounding cry" the family who claim it as their totem derive their generic name of Bus-in-aus-e-wug (Echo Makers). This family

claim, by this allegory, to have been the first discoverers and pioneer settlers of Sault Ste. Marie, and again at Pt. Shaug-ah-waum-ik-ong."[18] In both the above speeches are evident the imaginative and mystical qualities of all tribes in the semi-nomad-hunter stage of culture. The contrast between this and the far more matter of fact council rites of the Iroquois is very striking. One wonders how much validity the astute Iroquois politicians would have accorded such an argument.

In these and all other translations recorded by Warren, we trace very plainly his own florid style of writing. In fact he does not claim to translate literally; but only to reproduce essential ideas. Therefore he makes his Ojibways a trifle too polished for the days before Haskell Institute.

The following speech, quoted from *Many, Many Moons,* is perhaps a more faithful illustration of Indian style—at least at the present day. Yet one can trace a generic likeness, especially in the references to animals and in the Indian mode of reasoning from analogy.

"LITTLE-CARIBOU MAKES 'BIG TALK'

Boo-zhoo! Boo-zhoo!
Me, Ah-deek-koons, I mak-um big talk.
Me, ol' man; I'm got-um sick on knee
In rainy wedder w'en I'm walk. Ugh!
Me, lak moose w'at's ol',
I'm drop-um plenty toot'!
Yet I am big man! Ho!
An' I am talk-um big! Ho!

(Hi-yee! Blow lak moose, ol' man!
Ho! Ho!

Hi-yi! Little-Caribou him talk
Lak O-mah-kah-kee, dose Bullfrog:
Big mout', big belly,
No can fight!)

Ugh! Close mout', young crazy buck!
You stop-um council-talk,
You go 'way council!

[18]Warren, *op. cit.*, pp. 87-88.

Sit wit' squaw!
You lak little poh-toong,
Lak pollywog tad-pole:
No can jump-um
Over little piece mud;
Can only shake-um tail
Lak crazy-dam-fool! . . .
. . . . . .
Keetch-ie O-gi-ma long tam' ago
Was say in Pine Point Treaty:
"All de 'Cheebway should be farmer;
All will get from Washin'ton gov-ment
Good allotment farm land,
One hondred-sixty acre each." Ho!
Ho! Eenzhun scratch-um treaty!
Stick-um t'umb on treaty!

W'at's come treaty? Hah?
Eenzhun got-um hondred-sixty acre,
But got-um too much little pieces,—
Pieces scattered over lake
Lak leaves she's blow by wind.
In tam'rack swamp by Moose Tail Bay
He got-um forty acre piece.
Ten mile away, on Lake of Cut-Foot Sioux,
In mush-kaig an' in rice-field,
He got-um forty acre more,
On Bowstring Lake, she's t'orty-mile away,
In sand and pickerel weed,
He got-um forty acre more.
Hondred mile away, on Lac La Croix,
W'ere lumberman is mak' big dam
For drive-um log,—an' back-um up water
All over Eenzhun allotment land,—
He got-um forty acre more,—all under lake!
How can Eenzhun be good farmer! Ugh?
He's gotum land all over lake!
He's got-um land all under lake!
For Eenzhun be good farmer
Eenzhun should be good for walking under water!

Should be plow hees land wit' clam-drag!
Should be gadder potato crops wit' fish-net!
For Eenzhun be good farmer
Eenzhun should be fish!
Ugh!
I have said it!

(Ho! Ho! Ho!
Hi! Hi! Plenty-big talk!
How!)"[19]

The songs of the Ojibway also reflect individualities of their natural environment. Miss Densmore, leading expert on Ojibway music, has classified 248 songs according to subject matter. Of these one third contain mention of some manifestation of nature. Her table and comment follow.

	Number	Percentage
Songs mentioning animals	30	36
Songs mentioning birds	71	21
Songs mentioning the sky	17	21
Songs mentioning water	11	13
Songs mentioning clouds	4	4.5
Songs mentioning the wind	4	4.5

". . . The animals mentioned in the songs are the otter, beaver, weasel, marten, crawfish, large bear, fox, deer, and dog; . . . . The birds mentioned are the crow, loon, owl, raven, plover, eagle, "thunder bird", and "water birds". Reference to water occurs principally in songs of the Midewiwin, the emblem of that organization being a shell, and all its traditions being associated with water and with aquatic animals." The rarity of songs of the horse or buffalo, reflecting contact with plains culture, is notable.[20]

In discovering the reflection of environment in the utterances of the Indians it is important to quote songs in which there is specific reference to the above mentioned subjects. Attention is called to the fact that the actual subject of the song may not be the animal or other manifestation of nature which is mentioned. In a later chapter (X) further compositions will be analyzed for their motivation (i. e., prime subject matter). In the present instance this is secondary to

[19]Sarett, *Many, Many Moons*, pp. 59-61.
[20]Densmore, *Chippewa Music*, II, pp. 16-17.

the reflection of environment, whether it be incidental or otherwise.

SONGS MENTIONING ANIMALS

"The big bear
To his lodge
I go often."[21]

* * *

"Turtle
I am sitting with him."[22]

* * *

SONGS MENTIONING BIRDS

"A loon
I thought it was
But it was
My love's
Splashing oar."[23]

* * *

"Little plover, it is said,
has walked by."[24]

* * *

SONGS MENTIONING THE SKY

"It will resound finely
the sky
when I come making a noise."[25]

* * *

"As the wind is carrying me
around the sky."[26]

* * *

SONGS MENTIONING WATER

"Across the river
they speak of me as being."[27]

[21]Densmore, *Chippewa Music*, I, p. 121. The above is the song of a medicine man. "Before beginning this song Main'ans said, 'In my dream I went to the big bear's lodge and he told me what to do. . . . This is what I say in this song which I made up myself. Every *dza'sakid* [medicine man] has his own animal which he sees in a dream and he learns from this animal what he shall do for the sick person'." pp. 121-2.

[22]*Ibid.*, p. 262. This is a dream song, referring to a magic "totem" animal.

[23]Densmore, *Chippewa Music*, I, p. 150. Obviously this is a love song.

[24]*Chippewa Music*, II, p. 295.

[25]*Ibid*, p. 270.

[26]*Ibid.*, p. 263.

[27]*Ibid.*, p. 81.

"A bubbling spring
Comes from the hard ground."[28]

* * *

SONGS MENTIONING CLOUDS

"Great heaps
of clouds
in the direction I am looking."[29]

* * *

"The shifting
Clouds."[30]

* * *

SONGS MENTIONING THE WIND

"One
wind
I am master of it."[31]

* * *

In concluding this discussion of the songs of the Ojibway it is impossible not to mention their curious "symbols of songs which never were sung." These symbols take the form of poles which are erected with banners or frames with pieces of cloth bearing "strange figures outlined in red and blue. . . . Symbols of the sun, moon, and stars are easily recognized and there are also crude drawings of birds. High up on many of the poles are tied bunches of rags that flutter in the breeze and suggest mystery." These painted symbols represent dreams which have never been fulfilled. To this day the young men of the tribe go away to fast and receive inspiration from the supernatural powers. If during such a vigil a dream comes, and is not fulfilled, the man erects a pole bearing the symbols of the song which he heard in his dream but never had the opportunity to sing. "Such a man was supposed to have special power to cure the sick. . . . In the springtime the owner of a pole frequently takes it down, lays it on the ground, and makes a feast. He asks his friends to come and 'preaches about the pole'. If some one 'wishes to secure life', he brings one of his garments with tobacco folded in it and ties the garment around the pole. In the

[28] *Chippewa Music, I*, p. 41.
[29] *Chippewa Music*, II, p. 273.
[30] *Chippewa Music*, I, p. 145.
[31] *Chippewa Music*, II, p. 271.

autumn a similar feast is often held, but the frozen state of the ground makes it impossible to take down the pole.

". . . His is the monotonous life of a reservation Indian who can not fully adapt himself to the white man's way, yet beneath it is the memory of a dream and above it is the symbol of a song that never was sung."[32]

[32]Densmore, *Chippewa Music,* II, pp. 247-50.

THE MEANING OF LIFE

BY PROF. J. K. MAJUMDAR, M. A., PH. D.

A GREAT deal of ambiguity attaches to the question as to the meaning of the term 'life". The term "life" has usually been confined to biological phenomena; "the initial question of Biology", we are told, "is the nature and characteristics of living matter—the determination of that wherein 'livingness' consists."[1] The term "life" has been taken to be the characteristic quality which is common to plants, animals and man and which distinguishes them from all other things in nature. "Life", Prof. J. A. Thomson warns us, is distinctively a biological concept and there is always a risk in transferring it to other fields.[2] In its widest sense, "life" mav be defined from the biological point of view as the manifestation of action and reaction between organism and environment. Or, as Spencer puts it: "Life is the continuous adjustment of internal relations to external relations." But this definition, Spencer thinks, is abstract and to employ its more concrete equivalent we should do well "to consider the internal relations as 'definite combinations of simultaneous and successive changes'; the external relations as 'co-existences and sequences'; and the connection between them as a correspondence."[3] Even so the definition, Spencer adds, is one-sided, inasmuch as it recognizes only the *form* and not the *body* of our conception of life.. "That which gives the substance of our idea of life is," he says, "a certain unspecified principle of activity. The dynamic element in life is its essential element."[4] And this dynamic element or principle of activity is, he maintains, unknown and unknowable. What we are concerned with in science is alone

[1] J. Y. Simpson, "Biology", *Encyclopedia of Religion and Ethics,* Vol. II, p. 622.

[2] "Life and Death", *Encyclopedia of Religion and Ethics,* Vol. VIII, p. 1.

[3] *Principles of Biology,* Vol I, p. 100.

[4] *Ibid.*, p. 114.

the phenomena of life which are accessible to our investigations, and this surface knowledge holds good within its own domain. Thus, he argues, "The statement that the continuous adjustment of internal relations to external relations constitutes Life as cognizable by us, is not invalidated by the admission that the reality in which these relations inhere is incognizable."[5] Hence, for the purposes of science, the above definition will suffice for our purpose, but he insists that even so considered the definition should not include the various abnormal manifestations, which do not properly come under the term "life", though we may safely accept it as covering the normal manifestations.

The "dynamic element", which is thus claimed by Spencer as forming the essence of our conception of life, has perhaps found explicit recognition in the writings of the Vitalists. They contend that mechanical or physico-chemical concepts do not suffice for the treatment of biological facts. Driesch, for example, postulates a non-perceptual "vital agency", or, as he calls it, "entelechy", which is associated with the organisms as distinct from what he regards as non-living things. This "entelechy" directs the physico-chemical processes in certain cases, so that their results are different from what they would have been apart from its intervention. This postulated entelechy is "not a new elemental consequence of some constellation", but it is supposed to be a genuine agent "at work". In Driesch's view the "entelechy" is non-spatial in nature, autonomous and without any seat or localization. It is immaterial and not physical energy. Its function is to suspend and to set free, in a regulatory manner, pre-existing faculties of inorganic inter-action.

Dr. J. C. Bose, the great Indian scientist, is decisive in his rejection of the theory of vitalism. A stimulus produces a certain excitatory change in living substances and the excitation thus produced may express itself in either of the two forms of mechanical or electrical response. In mechanical response the excitation produced expresses itself in a visible change of form as seen in muscle, while in electrical response it expresses itself in certain electrical changes, and not in any visible alteration, as in nerve or retina, and while the mechanical mode of response is limited in its application, the electrical form is universal. Bose further contends that the mechanical and electrical modes of response are practically identical in character, and that not only can the electrical mode of response

[5] *Ibid.*, p. 123.

take the place of the mechanical one, but that the former has this advantage that it is applicable where the latter cannot be used. Now, this irritability or responsiveness of the tissue, either in its mechanical or electrical form, was supposed to depend on its physiological activity, seeing that under certain conditions it could be converted from a responsive to an irresponsive state, either temporarily, as by anaesthetics, or permanently, as by poisons. From these facts that a living tissue gives response, while a tissue that has been killed does not, it was concluded that the phenomenon of response is characteristic of a living organism. And, Bose thinks, from a confusion of "dead" things with inanimate matter, it has been supposed that inanimate matter must be irresponsive or incapable of being excited by stimulation. "In irritability", writes Dr. Verworn, "there exists a phenomenon which, as was believed, distinguished all organisms from lifeless bodies, and appeared to mock at a physico-chemical explanation. The unexplained conception of irritability, therefore, ... became the starting-point of *vitalism* or the doctrine of *vital force*, which in its most complete form asserted a distinct dualism of living and lifeless nature. . . . . The vitalists soon laid aside more or less completely mechanical and chemical explanations of vital phenomena, and introduced, as an explanatory principle, an all-controlling, unknown and inscrutable force hyperméchanique. While chemical and physical forces are responsible for all phenomena in lifeless bodies, in living organisms this special force induces and rules all vital actions.[6] In opposition to the vitalists' assumption of the super-physical character of response Dr. Bose urges that the necessity for maintaining such a dualism in nature must, on theoretical grounds, fall to the ground if it can be shown that similar effects obtain amongst inorganic substances also, and he claims to have shown that not only the fact of response, but all those modifications in response which occur under various conditions take place alike in metals, plants and animal tissues. As a ground of his contention, Dr. Bose parallelises these phenomena as exhibited in the three classes of substances. He maintains that in a living animal tissue under stimulation the wave of molecular disturbance is accompanied by a wave of electrical disturbance. This characteristic of exhibiting electrical response under stimulation on the part of animal tissues is, he contends, not confined to it alone, but extends to vegetable tissues in a like manner. In these cases Dr. Bose

[6] *General Physiology*, p. 18.

claims to have shown that the same electrical variations as in nerve and muscle are obtained. If we pass to inorganic substances, and use experimental arrangements similar to those used in the case of animal and vegetable tissues, we find the same electrical responses evoked in metals under stimulation.[7] To establish this contention Dr. Bose tries to show experimentally the similarity, nay the essential identity, between some of the phenomena and their modifications, which are connected with their responsive character, in all cases, animal, vegetable and metal. This is corroborated in the cases of negative variation, relation between stimulus and response, effect of superposition, uniform responses, fatigue, staircase effect, increased response after continuous stimulation, modified response, diphasic variation, effect of temperature, effect of chemical reagents, etc.[8]

As a conclusion drawn from the above considerations, Dr. Bose observes: "Living response in all its diverse manifestations is found to be only a repetition of response seen in the inorganic. There is in it no element of mystery or caprice, such as we must admit to be applied in the assumption of a hypermechanical vital force, acting in contradiction or defiance of those physical laws that govern the world of matter. Nowhere in the entire range of these response-phenomena—inclusive as that is of metals, plants and animals—do we detect any breach of continuity. . . . . The study of processes apparently so complex as those of irritability . . . . must be faced, and their investigation patiently pursued, without the postulation of special forces whose convenient property is to meet all emergencies in virtue of their vagueness. . . . . Amongst the phenomena of response there is no necessity for the assumption of vital force. They are, on the contrary, physico-chemical phenomena, susceptible of a physical inquiry as definite as any other in inorganic regions.[8a]

"Irritability" is considered by Bose to be due ultimately to "molecular responsiveness", and excitatory response to be "brought about by the molecular derangement consequent on stimulus, with the subsequent self-recovery,"[8b] and he insists that similar excitatory response is given even by inorganic matter under stimulation. "Irritability or molecular responsiveness, therefore," observes Dr.

[7]For an account of the experiments, see J. C. Rose, *Response in the Living and Non-Living*, Longmans Green & Co.

[8]*Ibid.*

[8a]*Ibid.*, pp. 189-190.

[8b]See *Plant Response*, Longmans, Green & Co., p. 741.

Bose, "must be regarded not as characteristic of organic substances alone, but as the universal property of matter. In the case of what is commonly known as the living, we have merely higher complexities, with greater instabilities, of molecular structure. External stimulus is here liable to induce greater derangement, and the irreversible molecular change known as death takes place the more easily, the more highly organized the complexes may be. . . . . In studying the responsive phenomena of living organisms, therefore, we must fix our attention on their molecular aspect, and try to follow out the physico-chemical changes which are consequent on the molecular derangement induced by stimulus."[9]

So far as physical science goes, I think Bose has perhaps sufficient justification in resisting the vitalists' conception of life, which seems to be one-sided and insufficient.[10] The vitalists' notion of an "entelechy" as solely thwarting or holding in abeyance the so-called mechanical processes of the organism, as if the mechanical processes were simply blind and entirely at the mercy of the entelechy, seems to be contrary to ascertained fact, and from the point of view of science it can hardly be sustained. In an essay on "Life and Vital Energy" which forms the introduction to Rudolph Wagner's *Handworterbuch der Physiology,* Lotze long ago contended for what is called the mechanical view to a place in the science of physiology. In criticising the theory of vitalism as a scientific principle or doc-

[9]*Ibid.*, p. 741.

[10]Recent scientific researches in biology and physiology confirm in essence the contention that a physico-chemical explanation of vital facts holds good so far as science is concerned; e. g., Dr. J. S. Haldane holds that a "mechanistic theory of life" is correct so far as it goes, and that the two great physical laws of the conservation of matter and of energy can be justifiably extended to all living organisms, including human beings. Or, in other words, scientifically regarded, however complex the changes involved in organic activity may be, they are, at any rate, changes in a material system. Hence, in a sense, biology may be regarded as the physics and chemistry of organisms, i. e., vital or organic changes are physico-chemical changes. Thus among the biologists and physiologists the prevailing opinion is growing in favour of the mechanistic theory as supplying a clear working hypothesis without the postulation of a vital force. (See *Mechanism, Life and Personality,* Lec. I.) In the same strain Prof. R. F. A. Hoernlé, Dr. J. Johnstone, L. J. Henderson, etc., hold that so far as science is concerned the mechanistic theory of life obtains equally in both the domains of the so-called "organic" and "inorganic". In Dr. Johnstone's view, as science is concerned only with the description of "giveness", and a "givenness" is but one, though we arbitrarily divide it into two domains of the organic and inorganic, there can only be one way of describing it and that way is the mechanistic one. (See *Philosophy and Biology,* Intro.) Similarly, Prof. Hoernlé maintains that if we abstract from a scientific description of the phenomena of life its teleological character, then what are called "organism" and "machine" both alike can be analysed and their changes described in physico-chemical terms. (*Studies in Contemporary Metaphysics,* Chap. VI.)

trine, Lotze's main contention is that however peculiar, what the vitalists call, the principle of Life may be in itself, it can never be free from interaction with that same matter which is known to us to be subject to physical laws of its own, and that the conclusion which the facts suggest is that the phenomena of Life arise out of a special *combination* of material elements, no one of which has any claim to be called exclusively or pre-eminently the principle of life. But in Lotze's view the mechanical view, though true, can in no sense be regarded as final.[11] I shall, however, try to show that the theory of vitalism has perhaps some value from the point of view of philosophy. No doubt, the definition of life offered by Spencer as the "adjustment of internal relations to external relations" is only a *formal one*, *i.* e., it describes only the occurrences that take place between the organism and the environment, but that which Spencer called the *material* aspect of the conception of life and which he perhaps rightly thought to form the essential feature of the conception, lies in the principle of activity of which these occurrences are manifestations. It is with the occurrences that science may be said to be concerned, and philosophy with the active principle, and Dr. Bose is considering the matter from the scientific point of view. His view of life as consisting in "response to stimulus" may be said to correspond in certain respects to the formal definition of life given by Spencer. According to Dr. Bose, as we have seen, the responsive action, or, as he calls it, "irritability", is "ultimately due to molecular responsiveness and excitatory response is brought about by the molecular derangement consequent on stimulus with the subsequent self recovery." Or, in Spencer's words, it may perhaps be said that the internal relations are adjusted to external relations in an act of response. But so far only is there agreement. The intimate connection, nay the essential identity, between physical and physiological phenomena of response which Bose has attempted to prove, and in which he finds the strongest ground for attributing life to the so-called "inorganic", would find no support from Spencer and the physiologists who adhere to the division of nature into "organic" and inorganic."

This, however, is but one side of the story. The other side con-

[11]Lotze's contention is now upheld by Dr. J. S. Haldane, Prof. R. F. A. Hoernlé, Dr. J. Johnstone, L. J. Henderson, etc., who, though advocating a universal maintenance of the mechanistic theory of life so far as scientific description is concerned, do not regard it as, in any way, the final, nay it is, according to them, wholly insufficient and erroneous as a final explanation of the phenomena of life.

sists in trying to discern what lies behind these processes or manifestations, for, as Kant said, "life means the capacity to act or change according to an internal principle." This side of our conception of life may be said in Spencer's words to form the *material* aspect or the "body" of such a conception. The internal principle is perhaps what Spencer meant by the "dynamic element" or the "principle of activity", or in the vitalists' phraseology "entelechy", of which the processes of life may be said to be manifestations. The true justification for any such conception as this must be furnished, if at all, by philosophy. But for a fuller or more complete understanding of what we mean by life we must take into consideration both the sides and try to understand the one in the light of the other. The contention of Bose that the law of conservation of energy holds good in the action and reaction between the organism and the environment, as it obtains elsewhere, and that it introduces no mystical power such as would in any part thwart or place in abeyance the action of forces already operative, thus evinces itself in its true light. Prof. J. A. Thomson writes: "In the domain of the inorganic there is little individuality, no apparent freedom of action, no endeavour, no purposiveness, no learning in the school of time. But its uniformity has been a probably indispensable fulcrum for the lever of will."[12] The mechanical law of the conservation of energy has been maintained to hold good only in the realm of what is called inorganic nature. Dr. Bose, on the other hand, has tried to show that this law holds good in both the domains of the so-called "organic" and "inorganic". It should be observed that Bose's explanation is, in no sense, materialistic. Quite the contrary. The drift of his thought is towards spiritualism and he all along tries to dispose of the conception of "dead matter". How then are we to understand Bose's position? I think in this way. It has been customary to describe the workings or actions of the so-called "inorganic" things in nature as simply blind and mechanical and as taking place solely in accordance with mechanical laws. But this may be said to be rather an assumption than a statement of fact. The admission that "insignia of life have not yet been discerned either wholly or in their proper perspective" perhaps corroborates this view. The action and reaction which takes place alike between the organism and its environment and a so-called "thing" and its environment, or as Bose calls it its responsive action, consists in

[12] *System of Animate Nature*, p. 75.

molecular rearrangement, i. e. every particle plays a part in the responsive action, and while Bose insists that there is no necessity of introducing a vital principle to explain this fact, the statement should be taken with reserve. As a scientist Bose may be said to be concerned only with the phenomenal side of the problem of life, and from this point of view, what he urges may be true. Yet Prof. Ward is perhaps right in holding that "the real agents, whose appearances alone constitute the physiologists' phenomena, must be regarded as monads."[13] In other words, the rearrangement of the molecules, in which the responsive phenomenon is said to consist, is not something blind, but is a phenomenal manifestation of real agents at work. The vitalists, while pointing to the all important principle of activity or the "entelechy" even in the sphere of the so-called "living matter", leave unexplained what are called the mechanical processes of the organism, which play, as we have seen, an important and essential part in what is called the phenomena of life. In this respect it may be said that neither the mechanistic theory nor vitalism is a sufficient explanation of the phenomena of life, and while they are but one-sided accounts and in opposition with each other, pan-psychism or monadism claims to be able to replace both.

[13] *Realm of Ends*, p. 462.

THE SOUL OF ART

BY HARDIN T. MCCLELLAND

(Continued)

VERY often we read about new and more direct approaches to Art appreciation, and how much time or effort may be saved the prospective patron if he will only follow them. But commonsense should always reveal the snare in such lazy programs. True and valid Art-appreciation can be had only after the same manner that true and worthy Art-creation is accomplished. And that is through some sort of synthetic method of conception and design and coloring; it is only through a moral selectivism of theme and vehicle, subject matter and symbolic setting, that we ever really come by either representative or creative Art. And any appreciative attitude which lays claim to replical principles will take on the same complexion and viewpoint which went into the process of production. It will recognize that these principles are patterned after the methectic states of the creative process, and no sham aesthetic of stereotyped rules can render the proper understanding any easier or more direct.

The interested patron is to be congratulated for remembering Quilter's universalism in being able to see that "there is nothing that man has ever dreamed or hoped or feared, suffered, enjoyed or sinned in, which is not a fit subject-matter for Art; nor is there a single aspect of the mind or spirit which has not, or may not have, some fitting or commensurate analogue in form and color" ("Sententiae Artis"). But he will show equal vision and more discernment of judgment if he also takes George Mason's advice that "Artists may produce excellent designs, but they will avail little unless the taste of the public is sufficiently cultivated to appreciate them". Still, neither side of such good counsel goes the full length of the race. Even with an appreciable degree of cultivated taste for the excellence

of Art, one must still remember that there are no atomic weights for deciding the specific gravity of elementary Art. Its simplest forms are still composite structures of thought, design, color-sense, harmonic proportion and anagogic expression. And anyone who proposes to be a critic, a connoisseur, or even an intelligent patron of the Arts, either fine or industrial, must possess somewhat of these basic functions in his own mind if he expects to live up to his professions. For they are basic in the sense that both artist and art lover must share the same credentials if the particular form of Art which is created and loved is ever to be intelligently produced and appreciated.

In a theory of Fine Art advanced by Prof. Torrey close onto fifty years ago, the Beautiful is considered as being more often felt than understood, "the end of all the imaginative Arts being to express the truth of things in sensible forms, and in such a way that their forms, so far as Art is concerned, have no other use or purpose than simply to serve as the expression of Truth in its unchanging nature". But there have always been at certain times those who argue that the expression of Truth includes the expression of everything imaginable to the dual mind of man. This is a mistake, as the idea applies rather to artistic expression as a mere representation of some external form or internal perception. Such representative expression, including both good and bad art (that is, both true and false art), and following the immediate pattern of thought exercised by creators and critics alike, always shares the same degree of exaltation or degradation as their own individual cases may indicate. So that if their ideal, which may be either a true or false ideal seeking portrayal in one or another of the various forms of artistic expression, is fragmentary, sordid, risque or otherwise grown askew and decadent, the resulting creation is bound to be of similar nature and pattern; or, with the critic, the resulting "appreciation" is bound to be similarly alien and delinquent. This is known as the moral principle in aesthetic criticism, and applies equally to both those who would create and those who would appreciate any worthy form of artistic expression.

It is indeed an irresponsible if not a false art which works only for self-satisfaction or other sordid aims, holding no converse with the ethical influence and social welfare which is or may be derived from its public exhibition. Especially must this be guarded against nowadays when easy publicity and journalistic exaggeration often

combine (perhaps, and perhaps not, unintentionally) to misinterpret and exploit a new artist's work. This is a twofold misdemeanor in that if the new artist has really produced something worthy it is cheapened thereby, while if he is only an uninspired pretender the public is deceived and mocked. Hence, not only is it hazardous to be too credulous about what we *read about* new art, but it is equally dangerous to make too quick estimate of the new art itself. We cannot too diligently guard against the stealthy foist of commercial rubbish into the courtly salon of our nobler artists' creative efforts. We cannot afford to spend our time and energy in seeking the thrill of precarious art situations, when we are still far short of a thorough understanding of the safe and sane creations of the Masters. And when we have once taken firm grasp of the principles underlying true and valid art creation we will also have the means at hand for the honest and direct appreciation of its expression in either simple or complex forms.

But our intolerance should not be without reasonable bounds. By this warning I do not mean to bruskly abandon or repudiate all those subtle and elusory suggestions which any sensible analysis of the erratic works of Picasso, Gaugin, Matisse or Cézanne would afford any true philosopher of Art; but only to make sure of a few provisions for holding them at their proper perspective and if need be, to avoid wasting too much of our sympathy on the dullness and distortion which are concealed beneath their gaudy angles. Whatever may be said in extenuation of the raucous flare and vulgar angularity of their pseudo-art, their red grass and green faces, club feet and tubular torsos fail to "arrive" intelligently and seem to inspire only those who labor under the delusions of stricken aesthetic faculty. For, in order to have any degree of public patronage, the same obliquity and astigmatism must be present in the public mind and taste that was present when the artist did his crabbéd work, else he would have no patrons and hence no cause for continued zeal or effort.

On the other hand, however, if the public has the interest of true Art at heart or at least nearly uppermost in its varied cycle of activities, it will have its own simple tests of an artist's faith and work. Thus, provided that the journalistic panderers and predatory commercializers let the susceptible public do its own thinking long enough to *see the work of Art first,* I have no fear that true artists will be recognized and rewarded while the bad ones, the imposters

and crude ungifted pretenders, will be discouraged by public neglect or, if not totally hopeless, will be urged to reform and become proficient. There is a vast fund of encouragement to be derived from the fact that the public mind has no need of the lying blurbs and screedy propaganda so often foisted on its attention, that it rather has sufficient naive innocense and moral insight to make approximately just and accurate appreciations of every sort of artistic expression possible to human genius. Perhaps it is because genius is never snobbish, never concerned with vain pretentions of exclusiveness. It is instead always warm and cordial, patient, industrious and cosmopolitan in its feeling, always honest, genuine and humble in its thought, always conscientious and constructive in the expression of its work.

The inherent realism and idealism which are conjoined with such effectual harmony in the soul of genius were very aptly tagged by John A. Symonds when he wrote that: "There is a Beauty which is never found in Nature, but which requires a working of human thought to elicit it from Nature; a Beauty not of parts and single persons but of complex totalities, a Beauty not of flesh and blood, but of mind, imagination, feeling. It is this synthetic, intellectual, spirit-penetrated Beauty to which the Arts aspire".

Very few of us will be able to write down in our notebooks any such record of heroic sacrifice and generous service for the sake of art-lovers as may be read in Ruskin's notes relating to his great labor of saving Turner's legacy of private papers, sketches, paintings and water-colors. The prolific collection (more than 360 oil paintings, 135 water-colors, and twenty thousand sketches) now in the British National Gallery have the order and condition they enjoy all because Ruskin took about seven months of indefatigable unrewarded labor in sorting and smoothing them out of the apparently hopeless jumble that Turner has left them in. I often wonder how many of the high-speed ultra-modern patrons of Art would be sufficiently industrious and *generous* to serve any similar contemporary purpose. Labors of love are scarce indeed when everyone seems hellbent to wallow in the lazy ooze of profit-slime.

Very few of us, again, can find ourselves able to live up to the fine tribute which Charles Eliot Norton paid to the humble painter of birds, insects, flowers and foliage (Hamilton Gibson) upon his coming into fame for duplicating the scintillating hues and blending colors of a peacock feather in the painting called "The Peerless

Plume". A normal boy's life in the Connecticut hills gave him an abiding Nature-love that inspired his work and ambition for perfect realism. He had no thorough schooling in the intricacies of historical art, no travels abroad, no contact with any of the recognized master-artists, but through sheer industry, enthusiasm and close attention to Nature's inimitable designs he was able to paint a new symbol of Beauty ranking easily the equal of Hogarth's *line,* Rembrandt's *shell,* Murillo's *cherubim,* or his famous namesake's "Gibson Girl."

And turning to another sphere of activity, who can claim comparison of dignity and technique with those great masters of the Baroque, Sir Christopher Wren and Fischer von Erlach. Right now when it is found urgent that St. Paul's Cathedral is in need of many repairs the authorities have no architect ready at hand who would try to *improve* any of the existing arrangements or ornamental features. The Viennese architect too enjoyed a unique reputation for his artistic combination of sculpture and architecture in those "composite quotations" from the Italian Renaissance which he incorporated into no less than thirty buildings, monuments and churches in or about his native city, among them being the entrance to the building occupied by the Hungarian Bodyguard, the Holy Trinity Monument in the Graben, and the church of the imperial palace at Schonnbrun. Though starting out on divergent lines, one from scientific studies and the other from adolescent contact with complex and elaborate art-atmosphere in his home life, they both acknowledged the debt of originality to Michael Angelo the real pioneer with his life-like figurines and balcony plaques, and to Pietro de Cortona two centuries later with his pleasing adaptations of painting, metal work and sculptural combinations rendering the Baroque style plastic instead of rigid and severe.

These are only three examples, but they should prove sufficient to indicate the intention of my meaning in the titular reference. I do not presume to take in the full scope of all the Arts, else I would have to lease a whole library shelf somewhere in order to have sufficient space to accomodate some more or less appreciative mention of each one. Hence, perhaps there is no better brief way to illustrate the theory of various aesthetic functions than with the modern synthetic method. The component parts of this method are eclectic elements which harmonize in the makeup of a congenial "universality of idea and execution", as Hegel would say. All the different schools

and periods and nations have had their acknowledged masters and it is these masters who have contributed some measure of originality and representative power to the perennial progress of Art throughout the world. Teachers, critics, connoisseurs, philosophers of Art and other champions of aesthetic culture also come in for a place in the synthetic account, and even though we did not have room for all of them we could still be fair and generous enough to feel their presence while we were arriving at the final estimate of any particular situation, historical or functional.

Of course, we can readily see that no particular one of them seems to have possessed all of the subtle aperçus of genius wherewith to exhaust, in one individual's scant brevity of life and accomplishment, the whole range of artistic possibility. If it has taken all of the million or more masters of various aesthetic practice to make its history read the way it does, we would certainly be unreasonable to expect any particular one to be so versatile and pantologically perfect that all the rest were superfluous. The Caliph Omar tried that sort of folly when he thought the Koran contained the whole and only Truth and hence all other books were unnecessary. As with Literature, History, Government, Civilization itself, it has taken *all* of the world's past masters to produce the Art that is extant in the world today, and we cannot rationally doubt that it will have a future sufficiently exalted and functionally ample to include all the possible departures, developments and improvements which our successors will be able to make. We realize that the difficulties which vex us will be solved quite as surely as that the delights that fascinate us will be eclipsed and more thoroughly refined in the future achievements of Art. Scientific research into the normal expression and criticism of every field of symbolic functioning will be in the daily program; but especially in the field of Art and Music will we be looking anxiously for those eidolons which are right now urging us on to hotter pursuit and more eager expectation of some day realizing that wholesome attitude toward life which shall contain the true and valid aesthetic.

In that age I trust we will no longer share the mistakes of the technical critics and trepidaceous connoisseurs who seem ever unable to make tangible analysis of the elusive genius which animated Sir Joshua Reynold's rugged energy of the picturesque when, busy with his investigations of the Venetian secret of painting, his glazes and palette were rich with the golden glow of Vecchio and Titian; of

Rubens' smooth beauty of background or Van Dyck and Corregio's remarkable reproductions of the natural human complexion; or Turner's magic art of pearly tones and rippling color variations which Ruskin considered at its peak in the "Approach to Venice".

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